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A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY
MITCHELL BROS. COMPANY,
(INCORPORATED.)

VOL. V.

CHICAGO, ILLINOIS, MARCH 15, 1887.

No. 9.

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DUSTLESS

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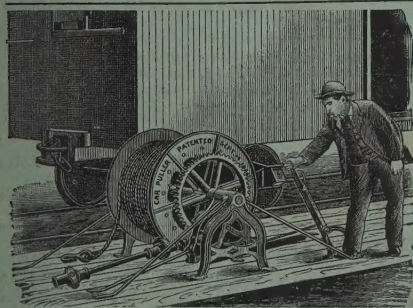
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EUREKA

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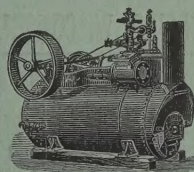
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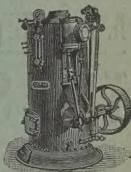


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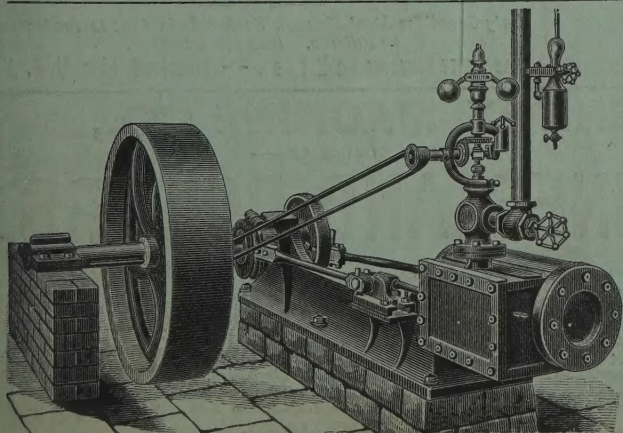
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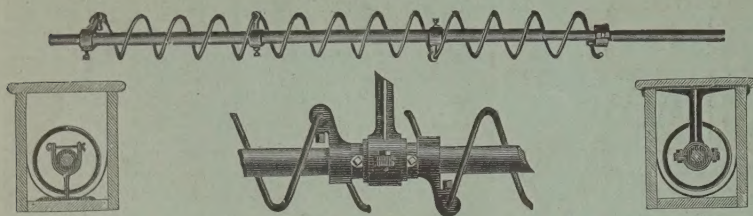
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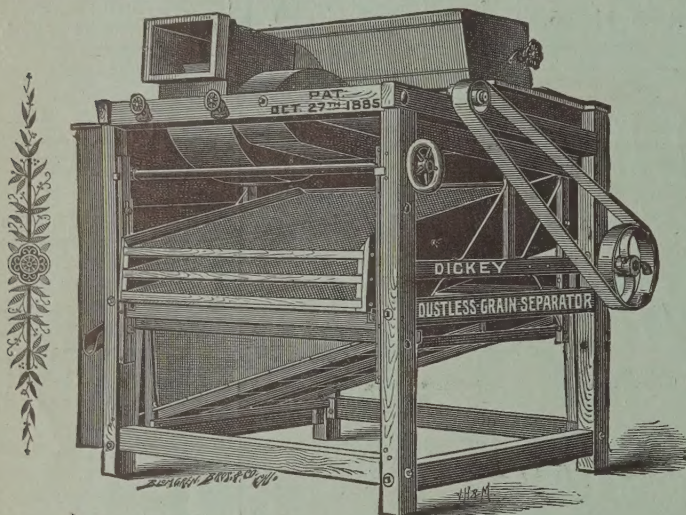
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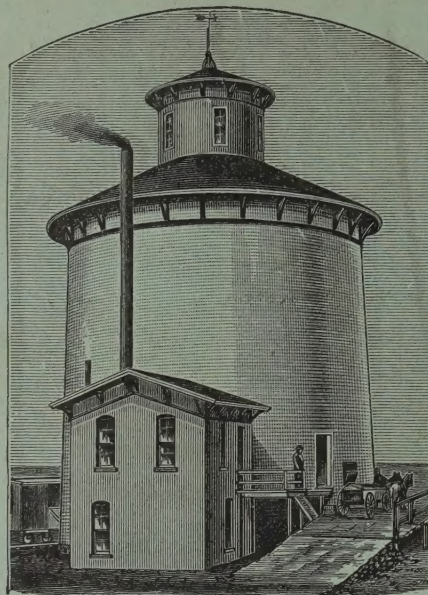
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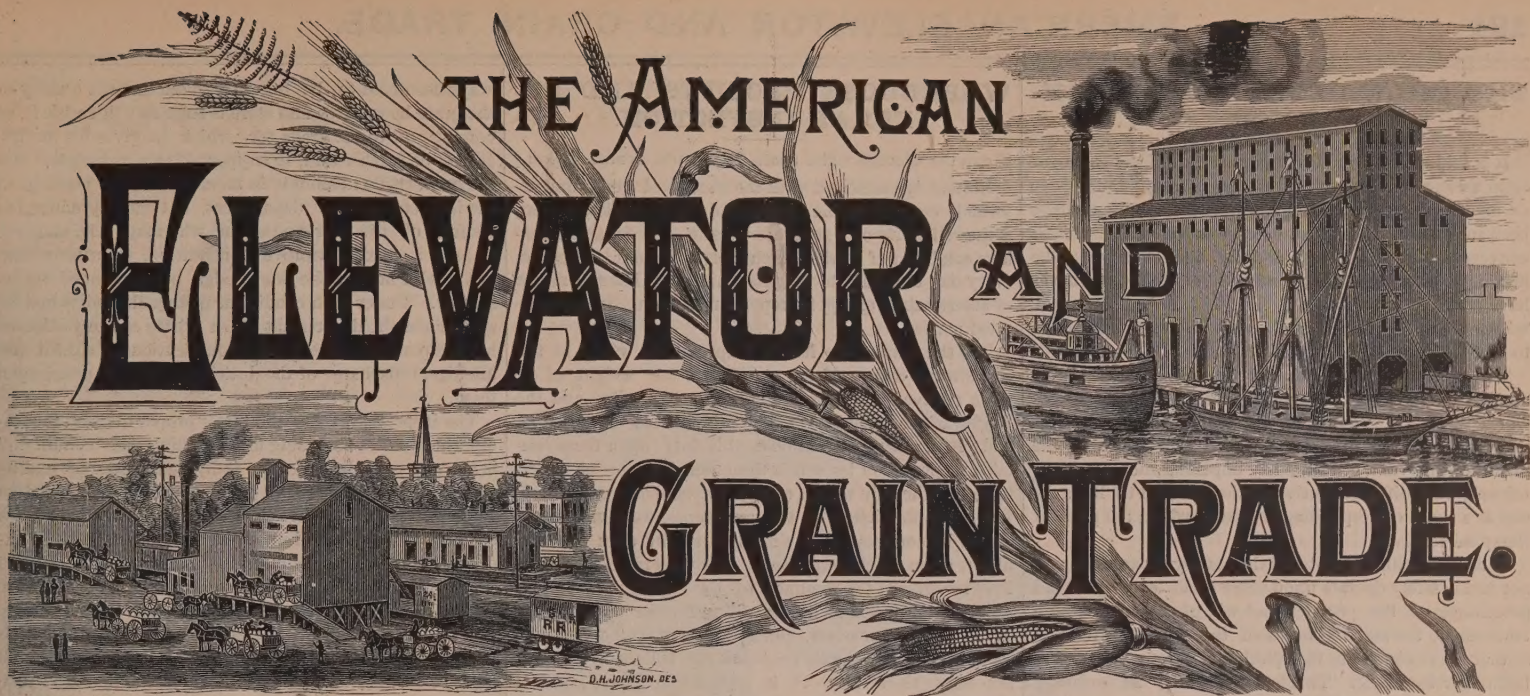
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WORRELL'S GRAIN COOLER AND CLEANER.

The attention of proprietors of elevators and warehouses is called to an excellent device, of which the accompanying engraving is a fine illustration, for the improved handling of our cereals. It is designed by Mr. S. E. Worrell, a practical man in this business, who has been before the public for a number of years as the inventor of a superior grain drier; and is a modification of one of his patents for this purpose.

Although the cut is considerably reduced, it is so clear as to be easily understood by a short explanation, especially with the aid of the sectional view in the upper right hand corner. The large rotating, inclined cylinder, made of boiler iron, contains a heavy cast flange, with a half round rim at each end, which fits in the grooved chilled iron friction wheels, supported by long babbitted bearings, cast solid in the heavy bed-plates beneath, one of which, it will be noticed, is bolted permanently to a very solid timber frame. The opposite one is swung between two upright posts by two lifting screws, for the purpose of varying the height of this end of the cylinder, which increases or decreases the retention of the grain in its passage through it.

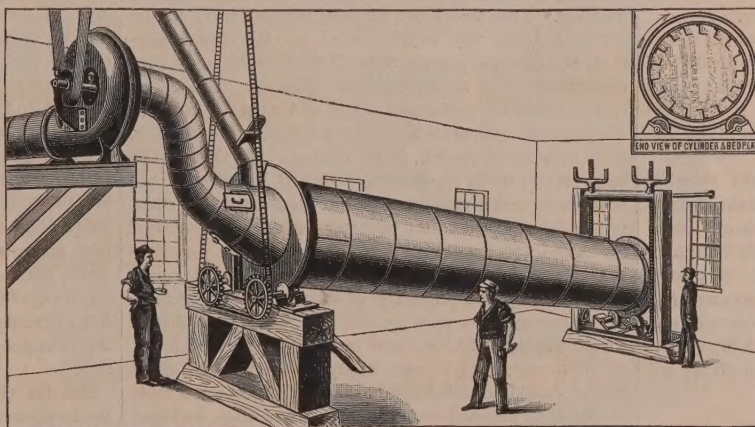
The noiseless, frictional gearing seen at the left, for revolving the cylinder, after five years' use, has, we are told, in every way proved its superiority over the usual cog arrangement for this purpose. The powerful exhausting fan, prominently shown, draws its supply of air from the far end of the machine through the bonnet and bent pipe, and discharges outdoors or in a dust room; both the fan and the sprocket wheels receive motion from a single shaft overhead; but the latter can be located on either side, if preferable.

Everything about it is designed with a view of simplicity, strength and durability. All the boxes contain oil reservoirs, with wick feed, so that very little attention is required to run it. In operation the hot and dirty grain is fed through the stationary air-bonnet into the cylinder, where it is repeatedly carried up by the troughs and dropped in numerous thin streams extending the entire length of the machine, as the troughs become inverted (see the small view), presenting a wonderful amount of surface for the action of the passing air current. You will here notice a very important fact, the air does not pass alone between the streams, but, owing to the rotation of the cylinder, it is absolutely obliged to travel diagonally through the sheets of grain. It will also be noticed that this method offers the least resistance to the forward movement of the air, thus making the work of the fan

much lighter and more efficient than in the common practice of bringing the air and grain into direct collision.

After making many tumbles during its passage through the entire length of the cylinder, the grain finally drops into the hopper, not only cool and clean, but much brightened in appearance, whence it is removed by elevator or conveyors. This efficient aerating action has considerable drying effect, and is very beneficial to slightly damp or tough grain.

By manipulation of the gate shown in the bonnet, the air current can be regulated so to draw out everything from the dust to the light, shriveled or rotten grains. A single passage through it will thoroughly cool the hottest



WORRELL'S GRAIN COOLER AND CLEANER.

grain, and with it the elevator proprietor need not keep half his machinery busy transferring during the "hot" season. These machines are especially valuable to dealers in off lots of grain and a great improvement on "mixing."

The machine shown is of large size, having a capacity of about 2,000 bushels per hour—but much smaller ones can be used to advantage—even as low as 100 bushels per hour.

For prices and further information, address S. E. Worrell, Hannibal, Mo., or Chas. Kaestner & Co., 303 to 311 S. Canal St., Chicago, who are now manufacturing his different drying machines.

If the average rate of yield in 1886 as shown for the several counties of Great Britain be compared, the lowest average of wheat is found to be 16.86 bushels an acre for Brecon, and the highest 40.55 for Aberdeen. For barley the lowest average yield was 16.03 bushels in Shetland, the highest 44.95 in Renfrewshire. In oats the estimated quantities range from 16.2 bushels an acre in Shetland to 61.98 in Cambridge.

DETROIT'S GRAIN TRADE.

At the installation of the newly elected officers of the Detroit Board of Trade, Secretary Lane submitted his annual report, from which the following facts are gleaned: The trade record for 1886 was not altogether satisfactory on account of the unsettled condition of labor questions, the extensive strikes and the attendant evils which result to complicate commercial interests and reduce trade in many channels. For Detroit, the secretary says, the general business record so far as it is possible to form an estimate, shows an increase in volume over that of 1885. The exchanges at the clearing house of the associated banks aggregated \$165,778,000, as against \$142,284,000 for 1885.

The grain movement of 1886, including the trade in breadstuffs, shows a satisfactory and healthy advance over the record for the preceding twelve months. The local production of flour was 296,500 barrels; receipts, 166,610; previous year, production, 255,500 barrels; receipts, 140,198.

Lake shipments show a gain of 5,021,681 bushels over the previous year, the whole amounting to 6,608,827 bushels. The receipts amounted to 5,622,334 bushels. "Had our grain storage room been equal to the demands of the trade," continues the report, "the record for the past season would have exceeded 6,000,000 bushels." As usual, the lack of storage room is complained of in the report. "Of all the receiving points on the lakes Detroit has always been the most inadequately supplied with elevators."

A statement of the storage capacity of St. Louis, Milwaukee, Toledo, and Chicago is incorporated in the report, from which it appears that the first named city has 1 bushel elevator room for every 4.06 bushels received; the second 1 for each 3.16; the third 1 for each 4.02, and the fourth 1 for each 4.04, while Detroit has only 1 bushel room for each 5.67 bushels actually handled. In order to be on an equal footing with rival markets, the secretary thinks Detroit should have storage room for at least 1,500,000 or 1,800,000 bushels.

A local paper at Greene, Iowa, says: Last week Frank Beal visited Chris. Clark, near Charles City, and saw some corn of his own raising last year, that the latter exhibited, which nearly took Frank's breath away from him. Three of the monster ears Frank brought home with him and they have been on exhibition. They measure 16 inches long, and each has between 900 and 1,000 kernels upon it. The variety is what is termed "The Bloody Butcher," and is the largest corn we have ever seen raised in this part of the country.

THE MILWAUKEE SPIRAL CONVEYOR.

It is said that Oliver Evans got his idea of the conveyor from an auger. It is certain that few attempts to improve on his idea have been made, and but few of these have been successful. We illustrate on this page a new idea in conveyors; one that is both original and effective. The idea of a conveyor without something to *push* would never have occurred to most of us. The inventor of the "Milwaukee Spiral" evidently studied into the nature of things to more purpose than the majority of us.

The chief feature of this invention is the employment of a helical or spiral rod (something like a corkscrew or the worm of a still), which is made to revolve on its own axis in a casing or trough. This new conveyor gives to the material it moves a continuously impelling, not an intermittent, but uniformly active motion parallel to its axis, and at a speed corresponding to that at which the pitch of the spiral revolves.

In dealing with the material the conveyor carries, it will not immediately operate upon more than a very small percentage of the product, but will give motion simultaneously to the material inside of the spiral by adhesion, so that the stock within the spiral and above the same is bodily carried along. This is not so with an ordinary flight conveyor, in which the stock does not move along parallel to its axis, but has an irregular motion on account of the friction produced by the pressure of the flights. Owing to the friction of the blade conveyor, a high motion will throw the stock over the flight by centrifugal force. The speed of the spiral conveyor can be considerably increased without showing any other tendency but that of moving its stock parallel to its shaft. It gives the material it moves a uniform, active motion, and at a speed corresponding to that at which the pitch of the spiral revolves. In fact, the more heavily the conveyor is fed the greater will be its effective power. The trough or conveyor box may therefore be made to extend above the spiral, and may be fed gradually or to its utmost capacity, and the material placed on top of the spiral will be carried along in a solid body. The spiral being only fastened at a few points, the conveyor is rendered flexible so that it may yield in any direction, and consequently is not liable to get out of order. The advantage of its high rate of speed allows the use of a materially smaller diameter of spiral, compared with that of the ordinary conveyor. Saving is effected by the smaller amount of power needed to work the spiral. It has less tendency to break the material it is conveying, therefore it is a good conveyor for any stock.

The shafts are solid wrought iron, and the spiral is made of heavy wrought wire which is held to the shaft by holders at the end and intermediate braces (see illustration). These braces act as a truss on the shaft and help support it. With no flights to be stripped off, very large capacity and no limit as to speed, the manufacturers feel sure that it is the coming conveyor for all classes of material. It is made by the COCKLE SEPARATOR MFG. CO., of Milwaukee, Wis., who will take pleasure in giving any desired information to our readers.

MINNEAPOLIS ANNUAL REPORT.

Secretary Sturtevant, of the Minneapolis Chamber of Commerce, has issued his annual report. We make the following extracts: The average price paid in this market for the year, says the Secretary, was lower than in any former year. The range of price was greater than in 1885, being 21½ cents against 19½; the highest quotation was on Jan. 2, 1886, 90½ cents, and the lowest Oct. 12, 69½ cents. In 1885 the lowest price was in January, 77½ cents, and the highest in June, 95½ cents. The receipts of grain exceeded those of 1885: Wheat, 2,003,700 bushels; corn, 51,000 bushels; oats, 391,000 bushels; flax seed, 154,000 bushels. The shipments of flour exceeded those of 1885 by 807,756 barrels, and the export 766,544 barrels.

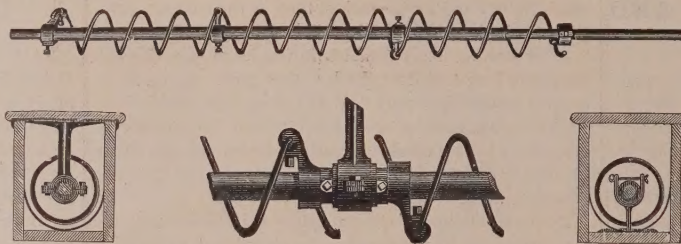
In regard to the export flour trade the secretary says: The exports of flour from Minneapolis since the first foreign shipments were made in 1878, has been a feature of the trade, commencing in that year with 109,183 barrels, in nine years it has steadily increased to 2,630,000 barrels in 1886. More than one-fourth of all the flour exported from Minneapolis was sent on through bills to foreign countries. This was more than one-fourth of the entire imports into the United Kingdom.

WAREHOUSE RECEIPTS AND OFFICIAL INSPECTION.

[From the Chicago Chief Grain Inspector's Annual Report.]

Intimately connected with the storage of grain, and absolutely essential to the utility of our registration system, is the reliability of warehouse weights. It is an anomalous condition of affairs which calls upon our inspectors every day to certify to weights which they have no means of ascertaining, except by reports made to them by interested parties.

It is the duty of the house inspectors to report to the Registrar as a basis of his certificates the weight of all grain received into store; and both to this office and the Registrar's the weight of all grain delivered out of store, and yet the law which imposes this duty upon them contains no provision by which these weights can be ascertained. The only source of any information on the subject lies in the tickets of the warehouse weighman, furnished by courtesy and unsupported by even the semblance of an official statement. The General Assembly of 1882 recognized the weakness of the existing law in this regard, and passed an act providing for the appointment of official weighmasters, but by reason of its too extensive scope and its inadequate provision for collecting the fees necessary to its support, it proved inoperative and was abandoned after a few weeks' trial. By a proper amendment to the act of 1883, or a new amendment providing simply for the official weighing of inspected grain into and out of store or in transfer in cars for further shipment, the desired end could be reached without imposing unnecessary restrictions upon the parties in interest, or in-



THE MILWAUKEE SPIRAL CONVEYOR.

terfering in any way with the proper conduct of their business. The weighmen of the houses should not be supplanted, but only supplemented by the state weighman, nor need the present responsibility of the houses for the correctness of their weights be lessened. The entire service could be performed either under the direction of the inspection department, or by a separate organization, at an expense no greater, in my opinion, than that of the same service under the present system of Board of Trade weighmen, and it would remove an element of uncertainty from the records of the registrar and the certificates of the chief inspector, which is, to say the least, undesirable. In making this suggestion I must not be understood as questioning the integrity of the present managers of our warehouses, for they are all, fortunately, gentlemen whose commercial honor and business standing can not be questioned; but it is made solely for the reason that no official should be called upon to make a report upon facts of which he has, and can have, no knowledge, and that any report so made must always fall short of that measure of public confidence without which it is comparatively worthless. Ever since the enactment of the law under which the state inspection system was established, it has been a recognized principle that the department can not be held responsible for or guarantee the grades once affixed to grain which has passed out of its control; but there still exists in the minds of some elevator managers an inclination to hold it responsible for an agreement of grades between the two inspections to which it is subject in passing through their houses, and for this reason I desire to recommend that your honorable board make some official declaration which will clearly define the duties of elevator managers in the matter of preserving the integrity of their grades.

The foundation of the principle above referred to lies in the fact that between the time of the original inspection at the receiving yard and the arrival of the grain at the elevator, days often, and sometimes weeks, will elapse in which the department has no means of protecting it from damage by weather, from dishonest manipulation, from fraudulent interchange of tickets, or from any other influence which may affect its grade. These contingencies can only be guarded against by the vigilance of the warehouseman in protecting his own interests, and it has al-

ways been held to be his duty to see that the quality of the grain he receives into store is such as will entitle it, on coming out, to the grade for which he gives his receipt. It may be further said, in support of this principle, that the grain while in store is in no sense in the custody of the inspector or the department, but entirely under the control of the warehouseman, who may, if he chooses, transfer it, mix it, improve its condition, or utterly neglect it with neither the knowledge nor consent of the inspector. Under such conditions neither the individual inspector nor the department as a whole can in justice be held responsible, except for a conscientious, faithful and intelligent discharge of the duties properly imposed upon them.

The inspection in grain, on its "proper division into established grades according to its quality and condition," is in every case the act of an individual inspector, and its subject an individual lot or parcel of grain, considered as an entirety, whether it be a sack full or wagon load, a car load or a cargo; and upon the correctness of these individual acts of inspection depends the accuracy of the work of the department as a whole. The inspectors are promoted to their positions after long and careful probation in the school of helpers, solely with regard to their qualifications, as expert judges of grain, and never should be affected by considerations of creed, nationality, politics, or friendship. The Board of Railroad and Warehouse Commissioners who are charged by law with this important duty have, with the advice and approval of the trade, established forty-eight grades of grain, distributed as follows: Of winter wheat, 15; of spring wheat, 6; of corn, 10; of oats, 6; of rye, 3; of barley, 8. Into one of these grades each lot of grain must be passed before it can be legally received into any warehouse of class "A" or be delivered out of it. The grades of each kind of grain necessarily approach each other gradually, and at their meeting points is found the "line grain" or grain which might, with almost equal propriety, be placed in either the higher or lower grades. It is upon this "line grain" only that a substantial disagreement between good judges of grain can occur.

For the correctness of his decision in passing upon each individual lot of grain, the inspector is made responsible under the law and is required to give "a good and sufficient bond in the sum of \$5,000" for the payment of any loss that may occur to the owners of the grain by reason of his neglect or failure to properly inspect it. It is not strange, in a service so difficult and depending so entirely upon accuracy of judgment and nicety of discrimination, with so many separate inspections crowded into a few morning hours, that errors of inspection or entry should sometimes occur. Indeed it is rather a matter of surprise that they do not occur more frequently; and I think it safe to say that only men of the long and critical experience required of members of this force, with a sense of their personal financial responsibility always before them, could accurately grade so many lots of grain (differing as widely in their characteristics as the climates in which they are grown), with so few errors.

But far the larger part of the claims made against the inspectors are for alleged errors in the inspection of grain transferred on track and are supported merely by the statements of consignees in the East, who claim that the grain is not up to the grade for which it was purchased. In such cases (the grain having been for weeks out of the custody of the department, subject to damage by weather, manipulation by unknown and perhaps dishonest persons, and especially to errors in transfer by the railroad companies), it is impossible, satisfactorily, either to verify or disprove the statements made, and I think your honorable board has done wisely in requiring that the grain shall be accepted or claim made while it is still within the jurisdiction, or, at least, within reach, of the department; and in all cases requiring in support of the claim such evidence as would be conclusive in a court of justice. In this connection I wish it said to the credit of our inspectors, that in all cases where your honorable board has considered the proof sufficient to justify decision against the inspector, the reward has been cheerfully and promptly paid.

There has been 10,000,000 grain sacks purchased in San Francisco since the late rains in California. Part of the purchases are on speculative account, but many of the orders are from consumers, and it is evident that both classes are confident of a large yield of grain.

THE "EUREKA" DUSTLESS RECEIVING SEPARATOR.

In this connection are presented illustrations of two styles of the "Eureka" Dustless Receiving Separators, as built by Howes & Ewell, of Silver Creek, N. Y., designed for use in mills, warehouses, and elevators, in cleaning wheat, barley, oats, and other grains of similar nature.

The first cut shows style of machine having one separator. As the separator is placed before the screen, it is entirely dustless, the fan absorbing the dust while the separator takes out a portion of the light screenings and refuse matter. The grain then falls on the screen, which throws off straw, headings, etc. Screens for cleaning any kind of grain mentioned above can be furnished at a reasonable price; a cockle screen and blank-plate, for use if the cockle screen is not required, is furnished with all machines. This machine is strongly built, requires but little space, and the price is low. It is built in six sizes, ranging in capacity for successfully and satisfactorily handling from 100 bushels to 2,000 bushels per hour, thus adapting it to the requirements of all classes of elevators and mills.

The second cut very fairly represents the "Eureka" Dustless Receiving Separator with Scalper and Double Separation.

The scalper throws off sticks, straws, headings, etc., before the grain goes to the main screen, which is of great importance, as will be readily understood. The large, wide separating leg receives the grain after it has been screened, and in it is removed a large amount of chaff, smut, and light shrunken grains. There is also a cockle screen, which, like the wheat screen, is interchangeable. The arrangement for feeding is automatic, by which a uniform feed is attained. Another important consideration in connection with this machine is that it is said to require much less height than any other machine now built for warehouse or elevator purposes. The price, an important consideration, is less than the ordinary warehouse separator now built, and unless it is specially desired to remove oats from wheat it will do what is usually required in warehouses or elevators. These are considerations that cannot be well overlooked in the purchase of this class of machinery. The machine is strongly built from best material, and in the best style of workmanship, and is warranted to give entire satisfaction in all cases where put up and run according to directions. It is built in six sizes, ranging in capacity for handling from 100 bushels to 2,000 bushels per hour. MESSRS. HOWES & EWELL have, probably, the largest establishment of the kind in the world, enjoy a trade which extends into every part of the globe where wheat is grown to any extent, and have achieved a most enviable reputation for the excellence of material employed, and perfection of workmanship displayed in the construction of their machinery. They will cheerfully and fully give such information as the interested reader may desire.

THE CONSTRUCTION AND EQUIPMENT OF ELEVATORS.

BY R. JAMES ABERNATHEY, IN "MODERN MILLER."

As previously stated the best method of connecting the engine with the machinery of an elevator is to couple the main line running through the basement direct to the engine shaft, which should have a speed of not less than 150 revolutions per minute. From the main line should run a belt up through the building to a counter-line just above the square of the main building, and in the first story of cupola. The cupola of an elevator of 15,000 bushels' capacity should be 20 feet high to the square above the

The reason for going to so much trouble in securing the cupola so well is to resist the pressure of wind-storms, which are very severe in open Western countries. So far as any weight or other strain is concerned, the cupola need only set on and be lightly fastened to the main building; but in such windy sections as are generally found in the great West where elevators are more generally in use than elsewhere, it is important they should be well anchored to main building, otherwise the wind would blow them off.

The first floor of the cupola should be about 8 feet above the main building. If the building is large, the floor would have to be higher, or high enough to reach a given number of bins by spouts from any one machine setting on the floor. Under the floor should be hung the counter-shaft above referred to. Its length will depend on how many machines are in the cupola to be driven from it. If there be a separator and corn cleaner, or two of either kind of machines, the counter-shaft will have to be long enough to reach both. If only one machine, a shaft ten or twelve feet will usually be long enough. The counter-shaft should have a speed of about 125 revolutions per minute. That is fast enough to drive any cleaning machine very easily, and is at the same time a very convenient motion for driving the elevators.

The elevators should be driven by chain belt using sprocket wheels. It gives a motion as positive as gears, with less expense and none of the annoyances belonging to gearing.

For driving the elevators a 9-inch sprocket wheel should be used on the counter shaft leading on to a 30-inch wheel on elevator shaft. That will give the elevator pulley a speed of between 37 and 38, which is about what the best practice calls for with 36-inch pulleys.

For driving one stand of elevators nothing lighter than a No. 67 chain should be used, and if very high, with large buckets, it will be much better to use No. 78 chains. The same number of chains will drive two light stands of elevators.

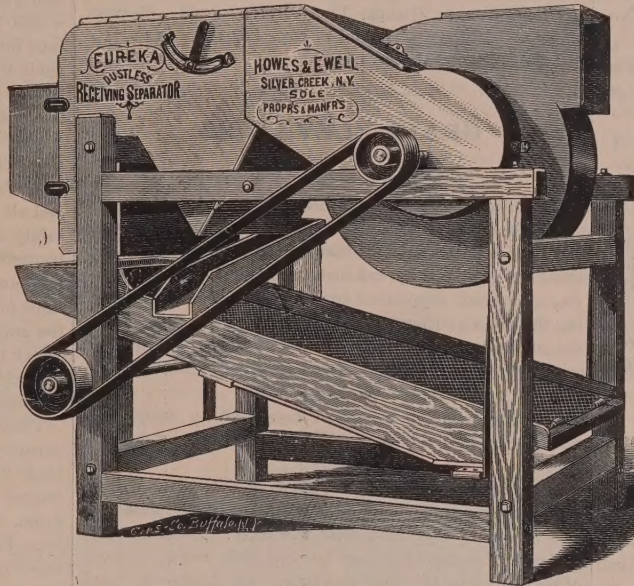
It is a good plan to attach a swivel spout to the discharge mouth of the elevator, or all of them if there be more than one stand, that can be operated from below so as to throw the material into the cleaner or any bin reached by the elevator.

The corn cleaner should always be set at the engine house end of the building, tailing outward, so that the cobs can be spouted out, above and beyond the boiler room or into it, as occasion requires. The cleaned corn is dropped from the machine into such bins as can be reached from it. Great care should be exercised in the construction of the wind and dust-spout leading from the fan. It should be ample in size, fully as large as the mouth of fan, not too long, and if any bends are in it they should be made on a large circle and never with an abrupt angle.

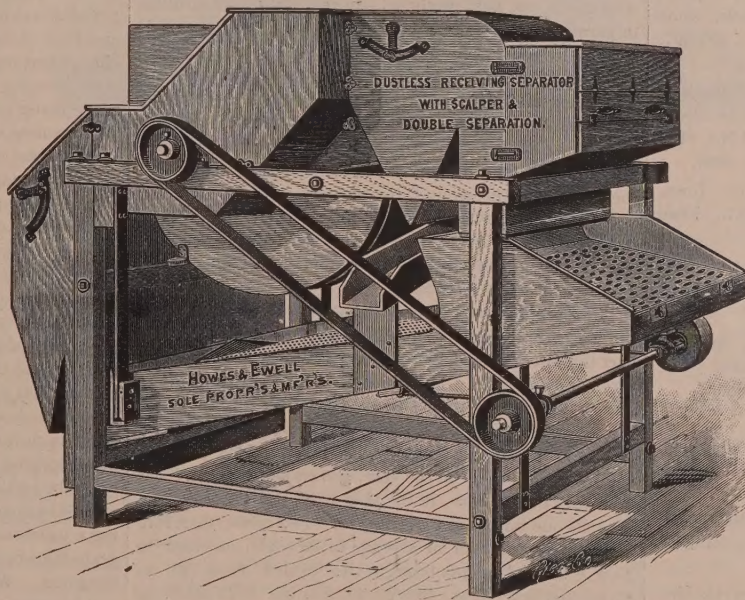
The operations of many good machines have been entirely spoiled by the faulty construction of the wind-spout. The same care must be taken in regard to fitting up the wind-spout to the separator as the corn cleaner. There should be even more care taken with the small grain separator, because it is more difficult to clean small grain as a rule than corn.

I may have referred to the fact before, but as I am up in the top of the building will say again, that for small houses it is very convenient to use a car-load hopper-scale as a shipping bin, which should be situated in the middle of building above the passage way. Into the scale the grain can be delivered through the elevators from any part of the house, and then weighed before shipping out.

Every elevator should in some way be supplied with a means of weighing all grain before loading into the cars for shipment, because in that way they can keep a clearer record of what they are doing; and in case of accident or design short weights are reported from the consignee, the record of weights on the books of the shipper is a very available and potent method of correcting reported short weights. Otherwise, very often no redress is ever obtained.



"EUREKA" DUSTLESS RECEIVING SEPARATOR—ONE SEPARATOR.



"EUREKA" DUSTLESS RECEIVING SEPARATOR—SCALPER AND DOUBLE SEPARATOR.

GLASS ELEVATOR BUCKETS.

H. Ebstein's Sons, glass manufacturers, of upper Silesia, make, we understand, glass elevator buckets in all the forms in which they are made of leather, iron, etc., and claim for them the following advantages: Their hardness resists all friction and makes their durability for elevating grain, cement, and other hard materials, very great. By their smoothness they are fitted for easily emptying the softest substances, as flour, gypsum, etc. Transported goods cannot be colored by the glass buckets, as they often are by the metal employed in others. No chemical action is possible, and a cooling influence is exerted on warm materials. The cheapness of the glass is also an important consideration. These buckets are suited for mills, breweries, malt, gypsum, cement, and powder factories, chemical works of all kinds, and in general for all establishments requiring the transportation of powdered or comminuted substances. The buckets are fastened to the belts by screws or by supplementary belts.

square of the main building, and ought to be full length of main building. The width of cupola is determined by circumstances. If large small grain separators are to go in it, it should be about 18 feet wide out to out; if only a corn cleaner is to go in, it need not be so wide. If the main building is cribbed, 8x10 sills should be run crosswise of the building at top and at proper intervals, according to length of building, to support the cupola posts. The top of the sills should be level with the top of the cribbed walls, and securely anchored to same. The posts and sills must be connected by mortice and tennon, and would be better braced both inside and out.

If instead of a cribbed building the elevator be built on the balloon frame plan, then the four corner-posts of the cupola should be run from the bottom of main building clear up through to top of cupola.

As it is not generally convenient to get timber of sufficient length for that purpose, it is just as well or better to take 2x8s or 2x9s and make posts the necessary height by spiking or pinning four thicknesses of them together,



Issued on Feb. 15, 1887.

APPARATUS FOR SEPARATING GERMS FROM CORN.—Gilbert S. Graves and Roger W. Graves, Buffalo, N. Y. (No model.) No. 357,708. Serial No. 216,136. Filed Oct. 13, 1886.

CAR STARTER.—Thomas Butler and Adolph Ligibel, Jersey City, N. J. (No model.) No. 357,759. Serial No. 207,431. Filed July 8, 1886.

DRIVE CHAIN.—Nelly P. Levalley, Milwaukee, Wis. (Model.) No. 357,611. Serial No. 178,065. Filed Sept. 24, 1885.

FRICTION CLUTCH.—D. Randolph Kinyon, Raritan, N. J., assignor of one-half to Job C. Kinyon, same place. (No model.) No. 357,608. Serial No. 218,304. Filed Nov. 8, 1886.

GRINDING MILL.—Claudius G. Freeman, Cincinnati, Ohio, assignor of one-half to Orville Simpson, College Hill, Ohio. (No model.) No. 357,767. Serial No. 202,822. Filed May 15, 1886.

GRINDING MILL.—Leonard D. Harrison, New Haven, Conn. (No model.) No. 357,925. Serial No. 196,930. Filed March 29, 1886.

Issued on Feb. 22, 1887.

APPARATUS FOR ELEVATING AND DISCHARGING GRAIN.—Thomas Schofield, London, Eng. (No model.) No. 358,075. Serial No. 196,331. Filed March 24, 1886.

FANNING MILL.—Isaac H. Lamoreux, Holland, Mich., assignor of one-half to Reinder E. Werkman, same place. (No model.) No. 358,281. Serial No. 207,860. Filed July 13, 1886.

GRAIN CLEANER.—Wells E. Sergeant, Minneapolis, Minn., assignor of one-half to Jacob H. Cook, same place. (No model.) No. 358,077. Serial No. 197,697. Filed April 3, 1886.

GRAIN CLEANING MACHINE.—Wells E. Sergeant, Minneapolis, Minn., assignor of one-half to Jacob H. Cook, same place. (No model.) No. 358,302. Serial No. 219,490. Filed March 28, 1885. Renewed Nov. 20, 1886.

GRAIN SPOUT.—John S. Metcalf, Burlington, Iowa. (No model.) No. 358,052. Serial No. 208,717. Filed July 22, 1886.

HAY BALER.—William D. Arnett, Morrison, Col. (No model.) No. 358,245. Serial No. 194,480. Filed March 8, 1886.

HAY PRESS.—Jasper Billings, Toledo, Ohio, assignor of one-third to W. Royce, same place. (No model.) No. 358,375. Serial No. 205,965. Filed June 23, 1886.

Issued on March 1, 1887.

CAR STARTER.—Bernard B. Brady and Andrew B. McCanna, Chicago, Ill. (No model.) No. 358,642. Serial No. 219,564. Filed Nov. 23, 1886.

CONVEYOR MACHINE.—Jas. M. Dodge, Philadelphia, Pa. (No model.) No. 358,652. Serial No. 217,432. Filed Oct. 28, 1886.

ENDLESS BELT BUCKET ELEVATOR.—William G. Herbert, Liverpool, county of Lancaster, Eng. (No model.) No. 358,551. Serial No. 212,149. Filed Aug. 30, 1886. Patented in England Jan. 4, 1884, No. 639.

FANNING MILL.—John S. Constant, Kirkpatrick, Ind. (No model.) No. 358,543. Serial No. 196,080. Filed March 22, 1886.

GRAIN SEPARATOR.—August Zastrow, La Harpe, Ill. (No model.) No. 358,825. Serial No. 126,619. Filed April 4, 1884.

WAGON DUMP AND ELEVATOR.—John S. Kidd, Des Moines, Iowa. (No model.) No. 358,457. Serial No. 202,219. Filed May 14, 1886.

Issued on March 8, 1887.

BALING PRESS.—Ephraim C. Sooy, Kansas City, Mo. (No model.) No. 358,898. Serial No. 204,214. Filed June 5, 1886.

BALING PRESS.—Joseph R. Webster, Worthville, Ky. (No model.) No. 358,902. Serial No. 218,939. Filed Nov. 15, 1886.

CAR STARTER.—Joseph M. Ertz, Poughkeepsie, N. Y. (No model.) No. 359,013. Serial No. 211,448. Filed Aug. 20, 1886.

CAR STARTER.—Levi H. Wilson, St. Louis, Mo. (No model.) No. 358,999. Serial No. 203,970. Filed June 1, 1886.

COCKLE SEPARATOR.—John A. Lacey, Rural, Ind. (No model.) No. 359,162. Serial No. 205,880. Filed June 22, 1886.

CONVEYOR FOR GRAIN, ORE, COAL OR EARTH.—Lyman D. Howard, Philadelphia, Pa. (No model.) No. 359,154. Serial No. 197,053. Filed March 29, 1886.

GRAIN DRIER.—Joseph C. Bates, Chicago, Ill. (No model.) No. 358,830. Serial No. 188,902. Filed Jan. 18, 1886.

WEIGHING SCALE FOR ASCERTAINING THE PERCENTAGE OF IMPURITY IN GRAIN, ETC.—Sylvanus H. Stevens, Chicago, Ill. (No model.) No. 359,187. Serial No. 209,389. Filed July 29, 1886.

GRAIN ELEVATORS.

[From G. Luther's Work.]

The question of the preservation of grain by means of storing has always been of more or less importance. In early times it was thought that the best method to preserve the grain was by exhausting the air, but this method was afterward supplanted by a reverse action, viz., bringing the grain as often as possible into actual contact with the atmosphere. In later years this method was dispensed with, and the old method again adopted, although with different appliances, with great success.

The simple appliances which were used in early times can now be seen in some parts of Spain, Hungary, and Russia.

Large holes or caverns were made in the ground or in the rocks, the walls being built with stones and plastered, or occasionally they were built with clay. In these holes the grain was deposited, and covered with straw, a layer of mud forming the final covering. To insure a more perfect preservation the grain was sometimes covered with chalk, the heat produced causing the upper stratum to germinate, whereby a dough-like cover was formed, which prevented the other grain from decaying. In later years they have assumed the shape of floor granaries, on which the grain is stored in heaps, and preserved by shoveling or turning. In America the "dorade" of grain—since the middle of the present century the old system—was adopted, with the difference that, instead of boring the shafts into the ground, the silo was introduced.

America's grain trade has not only grown in its productiveness, but they have good agricultural machinery, and her simple and convenient storing and preserving appliances are of great advantage.

The European rural economy has to suffer greatly from the American competition, although 4,000 miles or more part the districts, and the wages paid there are nearly three times as high. The American agriculturist works with 100 per cent. profit, whilst his poor brother can scarcely make 2 per cent. Mr. Dalrymple, the largest farmer in the Dakota territory, has reckoned his cost for one bushel of wheat in the year, government taxes, and inventory transactions, in the year 1879, as 35.42 cents. He sells one bushel at Casselton for 75.80 cents; therefore his profit amounts on an average to 39 cents; carriage to New York and agents brought the bushel from \$1 to \$1.10, that is 28 cents; freight to Europe is 25 cents, so that the bushel, nearly \$1.35, when brought to the market, was almost 3½ times more than its production cost. The price paid in England for the wheat is—

On cost of production.....	30 per cent.
Farmer's profit.....	30 "
On freight.....	40 "

The pressure of the American competition has not yet reached its limit, as the farmer can, if necessary, deliver the wheat still 25 per cent. cheaper, and our farmers may yet suffer for long. The most successful means are those which reduce the prime cost of production, so as to enable farmers to bring the grain cheaper on the market. In all this concerning contrivances, America, the apprehended rival, takes the lead, especially in the building of granaries.

It is strange to observe how little has been done in this matter in the way of silo plants in Europe, although the Americans have been in possession of large silo granaries since 1846. But in Europe, American ideas are rather looked upon occasionally with slight suspicion, which seems to have prevented the silo granaries meeting their proper reception; and the erection of the so-called "improved American silo" at London and Trieste, about

which considerable fuss was made, helped only to destroy the little credit they had.

Only within the past ten years has Europe shown any appreciation of the significance of "grain elevators" or "silo granaries," and their introduction is taking place very slowly, but surely. The aim is economy, and the gain is to endeavor to get the full benefit of such establishments, benefits which can be pointed out with distinction by what has been accomplished in the United States.

The first collection of harvested grain takes place at the nearest railway station, where, with simple but practical appliances, a silo is erected without outside walls, and sometimes covered with slates; the arriving grain is shot into a hopper, where the bottom of an elevator is placed, which lifts the grain, which is then weighed, when it falls into the bins. When emptying a bin the grain is again lifted and weighed, and by means of a spout directed into a receiving wagon, or into a boat. At small stations two men and a horse with a capstan are sufficient for the working of the silo; but, of course, at larger stations a steam engine takes the place of the horse. Manual labor for handling the grain is entirely dispensed with, and all operations are completed with greater rapidity and safety than by transporting the grain in sacks. For the transport of loose grain neither the wagons nor the boats need any special construction, but both remain of the same practical utility for other purposes, and in this way the grain is forwarded to the large depots, the largest of which are situated on the inland lakes, where the grain is brought into the grain elevator, on the same principle but of larger dimensions.

These grain elevators vary in size, as does their storing capacity, which is from 600,000 to 800,000 bushels. Where boats bring the grain forward, vessel elevators are so arranged as to be sunk into the boats whilst they extract the grain; and such vessel elevators have an enormous capacity. For instance, there is one in Buffalo, unloading a vessel of 1,200 tons tonnage in the brief space of eight hours, which under ordinary circumstances takes from five to eight days. Grain coming up in wagons is conveyed direct into the building, where the same is weighed, and four or eight are then emptied at one time; the discharge and replacing of the wagons requires less than eight minutes to accomplish. This renders it possible to make better use of the wagons and boats also; therefore the expenses are greatly reduced, and furthermore, the storage rates are much lower in such grain elevators than in flour granaries, in consequence of the better construction and the space being thoroughly utilized. In case the grain is intended for export, the canalboats convey the same to the east coast, where it is transferred into an elevator, or possibly, direct into a large sailing vessel. This transferring operation is also effected by mechanical appliances. For instance, the large steamers of the Red Star Line, of Antwerp, can be loaded in three and a half hours at the Girard Point Elevator of Philadelphia. It may be said that the whole American grain trade is supported by these grain elevators; and further, the system of grain elevators is like unto a discount bank, and any one disposing of grain at Chicago may draw the same quantity and quality the next day at New York.

This system of business was only possible by introducing a universal classification of grain, and by appointing grain inspectors, whose duty it is to examine and classify the grain. Whilst the grain elevators are in private hands and in competition with each other, the control and legislation of grain is in the hands of officials. The whole produce, as it has developed itself since its introduction, cannot be more simplified.

The country which will go in first for this new system of storing, which is not only of great importance to the industry and trade, but also to the national economy, will gain a start over other countries, and this will be blissful for its rural economy.

A NOTABLE COPPER ROOF.

The state of Texas, which is about completing its new capitol, will cover it with copper, using about 800 squares.

The Cincinnati Corrugating Co., of Cincinnati, Ohio, has the contract for this copper roof, which will be, perhaps, the largest amount on a single building in the United States.

For buildings owned by the people, not by individuals, copper is far the cheapest roofing, for, although more expensive in first cost, it far exceeds all others in durability, and does not require painting, or other repairs, if applied properly.

A TYPICAL WESTERN ELEVATOR.

The important part which the elevator plays in the handling of grain is known to every one who has traveled over our Western states. While foreigners have of late adopted the American elevator at centers, following the model of similar houses here at terminal points, few of them have any idea of the perfection of our system of grain handling. Very few know that the small country houses are generally quite as perfect in their way as the mammoth establishments at the centers of trade and commerce.

The illustration on this page shows a typical country elevator of the better class. It is located at Moulton, Iowa, and is owned and operated by Mr. R. B. Carson. It has a capacity of 30,000 bushels, and is provided with all the conveniences suitable for an elevator of this size. The elevator was built in 1881 by the firm of Coffey & Carson, which had been in business about nine years. In 1883 the firm dissolved, Mr. R. B. Carson continuing the grain business. The elevator is a type of the class which have made the handling and the carriage of our vast crops of grain to the seaboard a possible matter.

TRADE AT PHILADELPHIA.

PHILADELPHIA, March 8, 1887.

Editor American Elevator and Grain Trade.—Trade is dull and subdued in temper as well as volume, but the exports of produce have been heavier than for several weeks and the imports of foreign merchandise have continued much in excess of the corresponding period last year. The restricting influences of unpropitious weather throughout the country have curtailed the distributive movement, the quiet aspect of speculation has been due to the absence of stimulating features calculated to widen the field of operations, and hence trading has been more or less of a professional character, and the quiet feeling observed in the merchandise markets arises from influences that usually prevail at this season of the year, which is the transition period from winter to spring. The outlook, however, continues to inspire confidence, and in every direction a hopeful feeling prevails that promises an early resumption of activity. The only cause for apprehension seems to be the fear that industrial prosperity may be disturbed by fresh labor contests, but the last miserable failure of organized labor in New York to throttle the industries upon which it subsists will probably prevent an immediate repetition of similar experiments. The spread of socialistic ideas and the preaching of anarchism in all large cities and towns that are centres of industrial activity, promises to keep alive this feeling of dissatisfaction and uneasiness that results in outbreaks between employe and employer, but the influence of these professional agitators is being lessened with every defeat. One of the most encouraging signs of the times, with respect to this vexed question of labor, is the fact that in not a few instances the orders of these self-constituted authorities have been defiantly disregarded, and disobedience is the death-knell of the union.

Speculation in wheat has been fairly active and prices have been somewhat irregular, the close on Monday showing an advance of $\frac{1}{2}$ ¢ @ $\frac{3}{4}$ ¢, as compared with our last report. There has been a good export inquiry, but business in this market has been restricted by light offerings. Milling demand has continued sluggish and unsatisfactory. The visible supply showed an unexpectedly large decrease of 2,259,000 bushels, and the whole statistical position, both here and abroad, is growing stronger.

The corn market has ruled firm, under light offerings and a fair inquiry for export, but speculation has been tame and local trade demand only moderate.

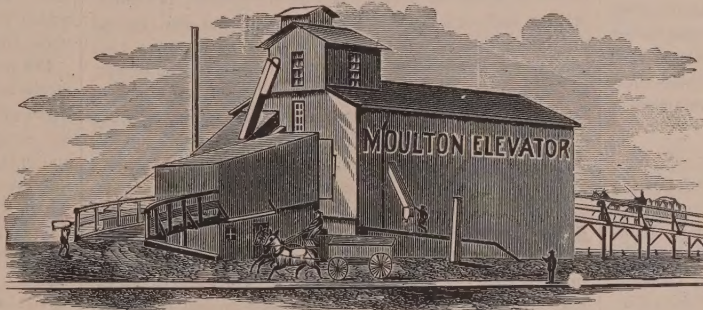
In oats futures have ruled dull and $\frac{1}{2}$ ¢ lower, while spot lots have met with a moderate local trade demand at slightly easier prices.

Our grain exports present a decidedly favorable comparison with the figures of the previous year, both with regard to the total quantity of these exports and their value.

During the first six months of 1886 the exports of wheat and wheat flour were 55,000,000 bushels, while for the last six months they reached an aggregate of 76,000,000 bushels, making a total of 131,000,000 bushels, against 95,000,000 in 1885. Unquestionably a large part of the increase here shown was from the crop of 1885,

the exports having been very light during the fall of that year, in which the total crop amounted to only 56,000,000 bushels in 1886, against 62,000,000 in 1885. The difference, however, should be only considered in the light of the fact that provisions, which are largely the product of corn, are reported separately, while wheat flour, the product of wheat, is included in the latter, the quantity being reduced to bushels. The exports of barley in 1886 were 1,190,000 bushels, against 245,000,000 bushels in 1885, while the exports of oats reached a total of only 880,000 bushels, against 5,800,000 for the previous year. We find from comparison made that the prices, both for wheat and corn, were lower in 1886 than in 1885. In the case of the former the exports for the year were valued at \$119,000,000, an increase of about 30 per cent. over 1885. But the quantity exported increased in a still greater ratio—about 37.8 per cent.—thus making the average price per bushel 91 cents in 1886, as against an average price of 96 cents per bushel in 1885. The total value of the corn exports in 1885 was \$32,900,000, and in 1886 only \$26,800,000, a decrease in the latter year of \$6,100,000, or about 18.5 per cent., while the decrease in bushels was only about 10 per cent. The average price realized for corn, therefore, was 48 cents per bushel in 1886, as against 53 cents in 1885. Still it is gratifying to be able to say that the aggregate of the exports as to value is greater in 1886 than in any year since 1883.

The Inter-State Commerce law, which practically goes into effect on April 6, covers transportation wholly by railroad, or partly by railroad and partly by water. It will, therefore, affect all shipments from the West to European points, and will require, as far as possible, the



A TYPICAL WESTERN ELEVATOR.

publication of rates on through shipment, such as from Chicago to Liverpool, as well as from Chicago to the seaboard cities. The published rates on the Pennsylvania railroad, for instance, will include the transportation on the ocean line which it controls from Philadelphia—that of the American Steamship Company. But the question will arise, how far does the clause requiring publicity on the part of every common carrier subject to the provisions of the act, apply to a steamship company which is controlled by a railroad company? Does it require publicity of rates on shipments from Philadelphia to Liverpool? The announcement of the policy to be pursued by the American Steamship Company is awaited by the grain receivers and shippers of Philadelphia with considerable interest. The company ought to post all its rates, and ought to adhere rigidly to them. There should not be any favoritism or discrimination either in rates or in the distribution of space. The grain men are waiting anxiously to hear what determination the steamship company will arrive at.

Howard Austin, secretary of the Produce Exchange, stopped long enough yesterday to say: "I haven't heard yet that the Baltimore & Ohio has placed any contracts for the erecting of extensive elevators and warehouses along the line of its railroad in this city. Soon after the committee of Philadelphia merchants waited upon the railroad officials at Baltimore three weeks ago, a letter was received stating that an answer to our request for terminal facilities would be given upon the return of President Garrett from Montreal; but although the president returned some time ago no answer has been received. The business men here are hopeful that the Inter-State Commerce law will break up the railroad pool and thus create a competition which will afford them the needed improvements."

Senator Wolverton, of Sunbury, was a visitor at the Reading general offices yesterday. He said: "I find that many of the shrewdest and best informed railroad officials are warming toward the Inter-State Commerce law, and expect it to prove beneficial rather than detrimental to

transportation interests. There is no doubt in my mind, after a careful study of its main features, that it will be of advantage to all good railroads if impartially executed. It is also going to largely benefit the Pennsylvania farmers by relieving them of the burden of discrimination in favor of the Western producer. The short-haul provision will help our home producers."

The freight business of the Baltimore & Ohio Railroad from Philadelphia has shown a steady increase during the last two months and has rendered it necessary to place four regular daily freight trains in service. The business during last week was particularly heavy. Largely additional facilities are promised to be placed at the service of shippers within ten days.

The reduction in street-car fares, which was inaugurated yesterday, will, it is said, cut down the cost of living in this city to the extent of \$1,000,000 per annum. Such a saving is worth feeling good over; but rapid transit by elevated or underground railroads is the crying want which we are urging upon councils all the time to satisfy. Our city is falling behind its competitors by reason of its adherence to old methods and worn-out systems, and if we would regain our lost position, speedy action in the lines indicated must be taken.

Owing to the continued depression in transatlantic freights in New York, a number of vessels have been chartered to be towed here to load for foreign account. The ship Governor Goodwin and the barks Importer and Violet will load grain here, the two last having arrived. Besides this there are a number of large iron vessels bound here from Europe.

A new feature in the grain market is the charter of three English steamships—the Cadoxton, Rokeby and Streoushalk—to load at New Orleans for Cork for orders at 4s. and 6d.

The market for grain freights is sluggish and weaker, with liberal supplies of tonnage. We quote steamers for prompt loading at 3s. 1½d. There is no berth room offerings in Glasgow or Antwerp steamers. Liverpool, 3½d. asked.

The American Line steamship British King, which sailed from Liverpool on Feb. 16 for Philadelphia, has not been heard from since leaving Queenstown, and fears are felt that she has met with some mishap to her machinery and is working her way into port under sail. The King has on board 260 intermediate and steerage passengers, principally bound for the West. Captain John Kelly, the senior master of the fleet, commands the King. He is one of the most competent navigators and able seamen in the transatlantic service, and has with him a crew of sixty-two men all told. No fears are entertained for the steamer's safety. Another overdue craft is the Italian bark Carlotta D., which sailed from Philadelphia on Dec. 9 for Cork for orders, with a cargo of 29,678½ bushels of wheat in bulk, valued at \$26,710. She has not been heard of since leaving the Delaware Capes, and her brokers in this city, Descovich & Co., consider her lost with all on board. Many cablegrams have been received by the firm from Italy asking for full particulars. It is thought that the cargo of grain was shifted during a gale, and the crew, not being able to right the vessel, were swept into the sea and lost. The Carlotta was commanded by Captain De Gars, who has had many years' experience at sea. The crew numbered eighteen men. Both vessel and cargo were insured.

J. C. D.

Regarding the smut on corn, it is a fungus growth on the surface and not on the grain, but in wet weather it absorbs the juices of the ear, finally drying up and liberating spores, which live on the ground during the winter and attack the corn the next season.

Says Chicago *Daily Business*: Hon. Lucius Salisbury, member of the Missouri Legislature, advises *Daily Business* that his bucket-shop bill has passed the House of Representatives by a vote of 93 ayes to 22 nays, and that it has gone to the Senate, "where I am confident it will also pass and become a law." The bucket-shoppers boast that they have the Senate "fixed," and that the bill will not pass that body. Schroeder, the leading bucket-shop man of Missouri, who was on 'Change yesterday, informed the editor of *Daily Business* in positive terms and with significant emphasis that the Salisbury bill would meet its quietus in the Senate. Advocates of the measure will do well to lay bare the wires that have been run by the bucket-shopper interests to defeat legislation in Missouri.



W. R. Eynon & Co., Cleveland, Ohio, have all they can do at the present time, with good outlook for the future.

Messrs. Coy & Thorp are building a shop at Wapella, Ill., for the manufacture of their patent elevator and measure.

The Cambridge Roofing Co., Cambridge, Ohio, report that prospects for business the coming season are good; also the demand for their well-known Crows' Patent Roofing is rapidly increasing. They want interested parties for their illustrated catalogue and price list.

The Crown Metal Perforating Company, of St. Louis, have placed the first of their heavy perforating machines in position in their new factory on Collins and Biddle streets. This machine has six plungers, perforates three feet wide, and will accommodate without trouble a sheet twelve feet long. Iron $\frac{3}{8}$ -inch thick may be perforated.

Geo. J. Fritz, of St. Louis, has ready for free distribution a valuable book for the use of steam engineers and firemen, and steam users generally. It is a book of forty-eight pages, and is usually sold for 25 cents, but he is sending to the trade free on application. It contains in concise form a vast deal of information that steam users are specially interested in.

Mr. Romweaver, a young millwright of Minneapolis, Minn., has just been granted a patent on a machine for pumping wheat. With this machine he can unload a car of grain in five minutes, lifting it to an elevation of 200 feet. An uncle of the inventor, in Germany, has thoroughly tested the pump, in his mill, and pronounces it entirely satisfactory.

The Babcock & Wilcox Co., 30 Cortlandt street, New York City, sold boilers during February to the following parties: F. Probst & Co. (their fifth order), New York City, for export, one 82-horse power; Wise Bros., Baltimore, Md., one 102-horse power; J. & R. Meily, iron-masters, Lebanon, Pa., one 208-horse power; Lickdale Iron Co., Lickdale, Pa., one 450-horse power; Forest City Sugar Refining Co., Portland, Me., second order, one 140-horse power; Columbia Rolling Mill Co., Watts, Pa., one 136-horse power; Mahoning Roller Mill Co., Danville, Pa., second order, one 125-horse power; "Arlington Mills," Lawrence, Mass., one 2,880-horse power; Gordon, Strobel & Laurean, limited, Philadelphia, Pa., third order, one 45-horse power; The Alabama and Tennessee Coal and Iron Co., one 1,872-horse power; Judson Mfg. Co., San Francisco, Cal., second order, one 292-horse power. Total, 6,332 horse power.

GRAIN WEIGHING AT MONTREAL

Wm. Inglis writes as follows to the Montreal Herald:

At the annual general meeting of the Montreal Corn Exchange Association I notice that a discussion took place in reference to having sworn weighers for weighing grain on elevators in the harbor of Montreal, and, at the same time, complaints were freely made about incorrect weighing on the Montreal Elevating Co.'s elevators. Such complaints are not by any means new, and it may be interesting to state that the St. Lawrence Elevator Co., when carrying on the elevating business in Montreal some years ago, had sworn weighers, whose weighing proved always remarkably accurate and satisfactory to all concerned. It is now nearly five years since the St. Lawrence Co. sold out. I arranged the sale with a director of the Montreal Elevating Co., and stipulated as a first condition that the men's engagements should be taken over, which ought to have secured to them employment with the Montreal Elevating Co. for at least one season. After the sale was concluded I wrote to the same director, on May 18, 1882, expressing the hope that the men would be well and fairly treated, but this reasonable expectation was not realized, and soon afterward an action at law was commenced against the Montreal Elevating Co. for wages and damages. The case has lasted over four years, and is still pending in the Montreal courts; it would therefore be out of place to refer further to the matter here, except to say that, manifestly, the occasion when these men were engaged was an exceedingly favorable opportunity for the Montreal Elevating Co. to have reformed their weighing

arrangements, had they been disposed to adopt a better system.

There appears to be a very fair opening now for an improved service in the floating elevator business at Montreal, and before long a project offering this advantage may be brought before the public.

THE BUCKET-SHOP.

At the monthly dinner and meeting of the Commercial Club, of this city, the Bucket Shop formed the theme of discussion by a number of prominent Chicago business men. Mr. Geo. J. Brine made the principal speech. He said that the danger of bucket shops and pool-rooms to the business interests of the city, and how they could be suppressed, were subjects well deserving the attention of the Commercial Club. He would, however, confine himself exclusively to the phase of so-called commercial demoralization known as the "bucket shop." This pernicious institution was recognized by every reputable and intelligent trader as exclusively a means of widespread gambling, but ignorance as to its ruinous influence upon the business as well as upon the morals of the community caused it to be regarded in some quarters with a certain degree of leniency. That bucket shops threatened the prosperity of every business represented there last night might be safely affirmed, and so he would prove. Their malign influence, however, was more directly felt by the great and influential organization—the Board of Trade.

In emphasizing the necessity for the suppression of the bucket shops, the speaker gave an exhaustive account of the interests which were imperiled by their existence. The Board of Trade of to-day was active, vigorous, and enterprising, and such organizations deserved and had earned the recognition which they now receive as agencies ever helping to establish the prosperity, consolidate the power, and add to the permanence and stability of our common country. It had been conspicuously the office and duty of our Board of Trade to care for and carry the surplus stocks of grain and provisions through the many dull and depressing periods of surfeit to those of activity and demand; and were it unhampered by the insidious and illegitimate encroachments of bucket shops, it would continue to be, as it had been in the past, an equalizer of value and an agency for the prevention of undue depression in prices. The public warehouses of the country to-day contained about 60,000,000 bushels of wheat, which the necessities of producers prompted them to sell in excess of immediate consumptive requirements. Speculators, capitalists, and investors of every form, availing themselves of the facilities of boards of trade, stepped in between producer and consumer and relieved the former, while awaiting the inevitable demands of the latter. It was the function of the Board of Trade to furnish an open, continuous, and ever-ready market for the surplus of the product of the country. Did our Board of Trade do its share of this work, and to what extent were its efforts restricted and curtailed by that parasite, the bucket-shop? The official figures of receipts and shipments of grain at Chicago for the three years ending Dec. 31, 1886, were as follows:

	Receipts.	Shipments.
1884.....	159,500,000	138,652,000
1885.....	156,000,000	135,587,000
1886.....	151,936,000	109,734,556
	467,436,000	383,973,556

And to-day there were in the warehouses of this city over 20,000,000 bushels of grain, every bushel of which had passed legitimately through the hands of members of the Board of Trade. During the same three years the members of the Board of Trade handled and cared for over \$500,000,000 worth of cattle and hogs. Every dollar of this has changed hands as absolutely and literally as have the monthly collections of those controlling the dry-goods, clothing, grocery, iron, lumber, and manufacturing interests of the city. This should be emphasized, as the enormous business of the Board of Trade was not only quite generally misunderstood, but had been unwittingly confounded with speculative transactions of a more or less sensational character. What we must do was to judiciously discriminate between speculation and gambling. The former might be and frequently is greatly abused; the latter was intrinsically and inherently demoralizing. The courts of England and this country had again and again decided that gambling in stocks or merchandise must not be confounded with speculation.

The methods of the bucket shop were pure gambling. It had been demonstrated by Mr. W. G. Nicholas, who had made the subject a special study, that during the last six years there had been a shrinkage in the value of the

wheat, corn, and oat crops of the country, to the farmer alone, of the amazing sum of one billion five hundred million dollars. Mr. Nicholas finds the causes for this in "exaggerated fears of overproduction and an influence even more powerful—the transfer of the vast aggregate volume of general country speculation from the regular exchanges, where commodities are dealt in legitimately, to the bucket shops, where mock-trading is done."

The Board of Trade had not only made vigorous efforts to prevent but to destroy this enormous evil. Its profitable character had caused a rapid growth, and these shops were now planted all over the country. They had diverted sufficient legitimate business, even before their true character was discovered, to cause enormous losses to many unfortunate communities. Having once obtained a standing, they had drawn their support, not only from the professional gambler, but from innocent citizens who had been deluded by their semi-respectable surroundings and defended by their falsehood and misrepresentation. They had retained through writs of injunction the facilities for prosecuting their nefarious business, and where deprived of such facilities by law sought to obtain them surreptitiously through the exchanges of other cities. The war against such disreputable institutions had been energetically waged by the Board, and there were now eleven injunction suits pending in the state courts in which the Board of Trade was defendant. Judges Bagby and Blodgett had decided that the Board of Trade had the right to elect to whom it should issue its market reports. Negotiations were now going on between the Board of Trade and the New York Produce Exchange to see if some measure could be adopted for breaking up the bucket-shop business. It could thus be seen that constant and vigorous action was being taken to destroy that enemy of legitimate, that wrecker of values, the bucket shop.

But how could they be suppressed? There were two methods of suppression. The first and most effective mode of suppression was the withdrawal of patronage—the stoppage of supplies. The other was the enactment and enforcement of laws for the suppression of the infamous concerns themselves, and the agencies through which they work. Education might slowly bring about the result through the first means suggested, but the sad experience of victims did not seem to hasten the desired result. He believed, therefore, that recourse must be had to the law, and in this connection solicited the hearty co-operation of the Commercial Club. The passage of the Riddle bill now before the Legislature would not only extirpate bucket shops already existing but effectually prevent the disgrace of their revival within the borders of Illinois.

THE AGRICULTURAL REPORT.

The March report of the Department of Agriculture, of distribution and consumption of wheat and corn, shows that thirty-six per cent. of the crop of corn is still in farmers' hands, a smaller proportion than in March, 1885 and 1886, but larger than in 1884. The estimated remainder is 603,000,000 bushels. The estimated proportion held for home consumption is 1,377,000,000 bushels, leaving 288,000,000 for transportation beyond county lines. The proportion of merchantable corn is eighty-six per cent., making the quality of the crop comparatively high, eighty being the average percentage merchantable in a series of years. The amount of wheat on hand is twenty-seven per cent. of the crop, or about 122,000,000 bushels, against 107 last year, and 169 in March, 1885, the largest surplus of the largest crop ever grown. It is three million bushels more than in March, 1884, and 24,000,000 bushels more than in 1882, after the shortest crop for recent years.

The proportion held for local consumption is 194,000,000 bushels, and the proportion to be shipped beyond county lines, 263,000,000. The quality of the crop is unusually good in the principal wheat-growing sections, the average weight being 58.5 pounds per bushel.

Cut grain rates are much in fashion in St. Louis just now. A cut of 8 cents is said to be open to anybody, while 10 and 12 cents off, it is alleged, can be easily obtained, and it is even asserted that an equal divide of full tariff would not be rejected on big lots. The reason assigned for this is that large quantities of grain are now going to New Orleans and to other places in the South by river, which makes freight for the East so scarce that the roads are willing to take business, and are glad to get it at almost any price.

COMMUNICATED

[We invite correspondence from every one in any way interested in the grain trade, on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interests of the trade at large, or any branch of it.]

WEIGHING AND REGISTERING SCALE WANTED.

Editor American Elevator and Grain Trade:—Will you please favor us, if possible, with the address of a firm that manufactures a bucket scale for placing under the discharge of the elevator, weighing and registering the weight of the grain as fast as elevated into the shipping bin,

And oblige,

JAY & Co.

St. Marys, Ohio.

[Our correspondents will doubtless find what they are seeking in our advertising columns.]

SUPERVISION.

Editor American Elevator and Grain Trade:—Now that the grain committee of the Buffalo Merchants' Exchange "have full control of the weighmaster and his assistants," and "only such weights as are given by the weighmaster shall hereafter be considered official by the Exchange," it is ardently hoped that the average shortage for the current year will be even less than ever before. And why not? If the weighing when done under the supervision of the weighmaster only should result in an "average shortage of less than a peck for every one thousand bushels," there should surely be a reduction of this average by a quart or two when the weighmaster is himself placed under supervision. Now supervision and full control are good; but the mariner who has been obliged to pay a three or four hundred bushel shortage when the average shortage was less than a peck will fail to derive entire peace of mind from a prospective average of two quarts or so.

Not much comfort to the sufferer who finds himself hundreds of bushels short to be informed that the average shortage is next to nothing.

Fact is, the supervision talked of is not supervision in the sense of overseeing, because a single weighmaster can not oversee all the weighmen at work under him. If the shortages of the past year were the result of mistakes—and some of them undoubtedly were—the supervision and full control by the grain committee will prove to be no better safeguard against errors than when the errors were made under the supervision of the weighmaster only; because errors are liable to occur at any time, and any method which simply oversees periodically will not answer the purpose.

In the Buffalo weighmaster's report for 1885, page 4, full cargoes from Chicago elevators, there were eleven instances in which the Buffalo weights were in excess of Chicago weights—the total overs being 4,020 bushels, against 2,594 short. The only inference from these statistics is that the overplus was the result of mistakes either at Buffalo or Chicago.

What the elevator system of this country needs is a system which will detect errors; after which it will not take long for the honest dealer to locate dishonesty.

But supervision by one man over ten or a dozen weighmen at work in as many different elevators is no check at all on either errors or dishonesty.

And we fail to understand how the system is improved by placing this one man under the supervision of a grain committee. In all other branches of commerce accounts are kept in such a way that any error is certain to be discovered—discovers itself, in fact. Until elevators adopt a similar system—a system that will discover the errors instead of effectually and forever covering them—the shortage trouble will continue ad infinitum.

The supervision scheme is useless, unless they can have a supervisor for every weighman and a real live committeeman for every supervisor.

Yours truly,

MARINER.

AN EFFECTIVE RAT TRAP.

The rat trap shown herewith is simple in construction. Take a barrel, and cut a square hole as large as possible in one end, fastening the portion cut out with cleats. This square piece should be fastened back again as it was, with a hinge, arranged so that the piece will drop down, and a little piece put on the barrel head to keep it from raising beyond the level of the head. Fasten a bent piece of hoop



iron to the trap with a handle projecting beyond the barrel, and to this handle attach as much weight as will just balance the square piece without anything on it. Suspend a piece of cheese or other bait a few inches above the middle of the piece, so arranged that when the rat alights on the top his weight immediately tips the trap, and into the barrel he goes. Fill the barrel about quarter full of water. —*Indiana Farmer.*

TRADE IN THE SOUTHWEST.

[Special Correspondence AMERICAN ELEVATOR AND GRAIN TRADE.]

KANSAS CITY, Mo., March 12, 1887.—Several elevator men have been hanging about the last few days trying to enthrone some of the capitalists at this point to put their good money into an elevator of mammoth proportions. So far these fellows have met with indifferent success. The crops of the past two years have not been sufficiently bountiful to justify any investments of this class. A number of the proprietors of the elevators already built here are trying their best to unload their stock. One poor fellow who has been in the business for six years declares that he put \$20,000 into one of the elevators here and that it has not paid him a cent up to the present writing, and that, on the contrary, he has been compelled to go down into his pockets and meet assessments made upon him. He has been buoying himself up with the conviction that the coming year will pay him some returns for his investments, but as the year advances and reports are brought in from all sections of Kansas that the prospects are slim for even an average crop of wheat, he has allowed himself to become disheartened, and is willing to sell at fifty cents on the dollar. Luckily the majority of the elevator men have been engaged in real estate speculations, which have paid them well, and they have not been driven to the wall because they were unable to meet assessments made. Had it not been for this there is little doubt but that there would have been several good-sized wrecks among the elevator fraternity to note ere this.

The grain commission men have the past month almost ignored wheat, and have placed themselves on record as able pork manipulators. One firm came within an ace of being forced to the wall on account of the failure of a bucket shop through which deals were placed for customers. This firm stood on the ragged edge for two days, but at present are in a safe harbor. This will have a healthful influence on all commission men to stick closer to their own legitimate spheres, and not put themselves in the power of outside parties.

A number of traveling men have been put on the road, not only by local elevator men, but by those at up-river points. It was found that Chicago parties were stealing trade that belonged naturally to this section, and to nip their attempts the drummers were called upon. The new venture has so far proven to be non-paying, so far as immediate receipts are concerned. But it is not for the present, but for the future, that this trade is being drummed up. It stands to reason that when there is no wheat in the country, farther than enough to supply the local demand, there can be no great business worked up in the way of shipments to any markets, and although the object of sending representatives in the field from this point is praiseworthy, it would have been far better had the same been done earlier in the year. These drummers answer a double purpose, however. They not only proclaim to the adjacent country the inducements offered to

shippers to this market, but they become informed as to the exact status of crops for the coming year. They know better than anybody else what the year 1887 has in store for the trade, and their statements seldom reach wide of the mark. On their surmises the conclusion is drawn that while the offerings of wheat will be fully as liberal as last year, yet they will not be up to the average. As to corn it is still difficult to prophesy what the status of affairs will be. It is said that preparations are being made to plant liberally, and it only rests with the season whether or no a large return will be had for the efforts put forth in this direction. The returns from the neighborhood of the city of Wichita are of the most satisfactory description, so far as the state of Kansas is concerned. At that point several large elevators have been lately erected, and it is the intention of the controllers of these plants to ship, so far as possible, to Chicago. The railroads centering at that place will aid in the carrying out of the programme, as it is for their interest to get the long haul every time. There is no city in the West that has better railroad facilities for the furtherance of a monopoly of the grain trade in its own section than Wichita. Railroads have been built from there to almost every point of the compass within the past few years, and still the work is going on. When in the near future the Atchison, Topeka & Santa Fe has completed its line through the Indian Territory elevator men will be in clover down there. They can then take all the wheat and corn from neighborhood sections, sell it to local millers, who in turn can send it down into the Lone-Star state, and in fact get a monopoly of the trade of the Western sections of that state. This is what the elevator men here should look out for. It is a mistaken idea that Chicago is the only point to be feared. The fraternity would spend their time more wisely if they would insist on seeing that competitive towns in Kansas were not getting the lion's share of the products of the land in proportion to amount of capital invested. There is but little doubt but that they would find this to be the case if they took the trouble to investigate more closely.

The elevator charges at interior points are also more favorable to the shipper. A number of the grain men throughout the state of Kansas have not yet forgotten the way they used to be treated by the elevators in this city three years ago. To be sure the system of inspection is much more equitable now than it was then, but it is by no means perfect. It won't do to say that it is more generous than that at Chicago. The countryman is not a fool by any means, and they see for themselves exactly the status of affairs. There should be a never-changing system here. It will not be effective so long as parties see fit to inspect from different standpoints every three or four weeks.

Above all it cannot be impressed too strongly on the minds of local elevator men the necessity of getting as many millers to come to the city as possible. This is their best salvation. Millers should be brought to the city who will feel that they will get from the elevator men exactly the grades that they need most for making the best grades of flour. It would be suicidal to bring in a class who had no confidence in the grades of grain sent out by local elevators. If such were the case it would stand with good reason that the country miller could argue: "Why do you ask me to buy of your elevators when your own millers refuse to trust them?"

Although several elevator men have been looking about with a view of building here, it is safe to predict that no new elevators will be erected here within the coming twelve months. Those who have already put their capital in this line will have clear sailing, locally, so far as competition is concerned.

The building of the cut-off in the state of Kansas from Marsville, by the Rock Island Railroad, is working against this city, and in favor of Chicago and up-river points. It is said that Atchison and St. Joseph are reaping the greatest benefits from this, and, in proportion to the amount of wheat in the country, their receipts have been more liberal than ever before noted. When also the Atchison, Topeka & Santa Fe has its line completed to Chicago there will be a vast amount of work necessary to retain the grain trade here. The officials of that line will discountenance all shipments along its line which has Kansas City for their objective point, in favor of Chicago. In this connection must also be taken the Missouri Pacific, which threatens to acquire a Chicago line, and then it will follow as the night the day that unless there are mills at this city that can use a vast amount of grain, the grain must give this point the go-by, and be landed in Chicago or Minneapolis. The attention of elevator men is called to this fact in order that they may the more feel the gravity of the situa-

Corn may germinate and grow, and yet be unfit for seed. Good seed will generally grow, even under unfavorable circumstances.

tion, and look about them while there is yet time for a solution of the difficulty. Now is the time—another year will be too late.

The business among commission men the past month has been very limited. At times there have not been a half-dozen cars sold within two days. As is usually the case, prices have followed in the wake of those at Chicago, and quotations from day to day would apply here, when the difference of freights is taken into consideration. The elevators have at present in store the following: 221,371 bushels of wheat, 376,635 bushels of corn, 21,828 bushels of oats, and 3,936 bushels of rye, making a grand total of 623,770 bushels of grain. The capacity is about six times the above amount. The total receipts have been about the same as noted last month, and there is little difference so far as the amount in store is concerned.

There is some talk as to the effect of the Inter-State law as regards freights. No conclusion has been come to as to what will be the outcome, and elevator men are compelled to leave the solution of the problem to the railroad officials, through whose efforts it is supposed the same was passed, although they tried to make it appear that the people were behind the movement, and that they wanted none of it in theirs.

THE CHESAPEAKE & OHIO CANAL.

This canal, which is now said to be wrecked, has an interesting history. It was the first great work of its kind in this country. Washington was its projector. His scheme was to form a chain of internal improvements by the route of the Potomac and across the mountains to the navigable waters which flow into the Ohio River. As early as 1774 he secured the passage of a law by the legislature of Virginia for the opening of the Potomac to navigation. The enterprise, however, lagged, and obstructions of war and poverty postponed it, although a company was formed with Washington as the president. It was not until 1820 that the work was pushed with vigor. By 1826 a board of engineers had examined it and computed the cost at \$22,000,000. The following year the fight for the canal was made. Just then the Baltimore & Ohio Railroad was pushing westward, and it tried to head off any competition from the canal. The contest was vigorous. President Adams was so much in favor of the canal that he wrote a long paragraph in his message, but all the members of the Cabinet did not indorse it, and he struck it out. The strongest opponent of the scheme in Congress was Henry Clay. The bill, however, went through by a good majority, and when the result was known cannon salutes were fired in both Georgetown and Washington. It was the great question of the day, and the city of Washington was very much incensed because it could not have the big ditch pass through it.

The enterprise was commenced the 4th of July, 1828. It was a great event, and there were thousands of people and a brass band and much enthusiasm. President John Quincy Adams was the central figure. It was he who broke the ground, and here is what he has left on record in his memoirs: "The president of the Chesapeake & Ohio Canal, with a very short address, delivered to me the spade, with which I broke the ground, addressing the surrounding auditory, consisting perhaps of 2,000 persons. It happened at the first stroke of the spade it met immediately under the surface a large stump of tree. After repeating the stroke three or four times without making any impression I threw off my coat, and, resuming the spade, raised a shovelful of the earth, at which a general shout burst forth from the surrounding multitude, and I completed my address, which occupied about fifteen minutes. The president and directors of the canal, the mayors and committees of the three corporations, members of Congress and others followed and shoveled up a wheelbarrow full of earth. * * * As has happened to me whenever I have had a part to perform in the presence of multitudes, I got through awkwardly, but without gross and palpable failure. The incident that chiefly relieved me was the obstacle of the stump which met and resisted the spade, and my casting off my coat to overcome the resistance. It struck the eye and fancy of the spectators more than all the flowers of rhetoric in my speech, and diverted their attention from the stammering and hesitation of a deficient memory."

Of course there were thousands of difficulties to overcome in the carrying out of such a great scheme. Money was wanted and a great deal of it. Richard Rush of Philadelphia was sent to England, but he failed to get anything there. In Amsterdam, however, he secured a

loan of \$1,000,000. Maryland and the United States contributed liberally, but twenty-two years elapsed before the canal was opened, after having cost over \$11,000,000. The great ditch, extending from Cumberland to Georgetown, a distance of 184 miles, with a total rise of 609 feet, passing through a mountain by a tunnel nearly a mile long and running over a conduit that cost \$2,050,000, was opened amid more festivities.

The canal is really a magnificent piece of work, and for a long distance it passes through some of the most beautiful scenery in the country. For years it prospered, and the business which it did was very lucrative in every way. It reached the rich coal-fields and had all the business it could attend to. But the railroad came. As early as 1834, when only a part of the canal was completed, President Adams took a short trip on one of the boats. "It is certainly a great work," he wrote, "but whether of proportional utility is yet to be ascertained. The new system of railroads is taking the place of the canal, and the horse can hold no competition with the locomotive." These were words of prophecy.

It is difficult to tell the future of the canal. At the last session of the legislature a covert attempt was made by a railroad syndicate to purchase it. That may yet be done, and it may be used as the bed of a railroad which shall be a competitor from the great coal-fields of the Baltimore & Ohio. Senator Gorman and Henry G. Davis were believed to be interested in this scheme. Unless the canal is continued or a railroad is built, the price of coal in Washington and Baltimore will take a very perceptible rise. The canal has been a heavy burden to Maryland, and has lost for it in principal and interest at least \$15,000,000.

CONTRACTS FOR FUTURE DELIVERY

Commenting on the Salisbury Bill in the Missouri Legislature, and the proposition to amend it so as to prohibit all dealing in futures, a writer sends a sensible letter to the *Kansas City Times*, from which we extract the following paragraphs:

The essential need of the future contract as a lubricant to the wheels of commerce, as an umpire between the expectations of the buyer and the necessities of the seller of farm products, as a regulator of values which would be at times too low and at times too high, according to the plenty of harvest and the dearth of spring, is a factor well recognized by thoughtful minds and experience has amply demonstrated its manifold advantages. From the embryo of that primitive speculation which bought cheap in the fall and stored away in barns to sell dear in the spring, has gradually developed the present elaborate and yet simple system of making contracts for future delivery, by which are subserved the interests of the producer, the shipper, the carrier, and the consumer. Through the medium of the future contract, vast costs are saved in many channels, time is economized, security is enhanced, celerity of transaction is secured. The very primer of economics recognizes future contracts as a necessity of trade and as a benefit to society. Legal tribunals sanction and enforce them, they have grown into commercial usage as a vital adjunct.

To attempt to class in one sweeping statutory prohibition such contracts for future delivery as are daily made upon all boards of trade with the wagers of the self-confessed gamblers who run the bucket shops would be a piece of legislative folly from which the hard common sense of the mass of Missouri's legislators will surely deliver them. The man who buys or sells wheat under the rules of a chartered grain exchange cannot enter into a gambling transaction even if he so wishes, and has no other intent. He enters into an absolute contract to receive if he buy or to deliver if he sell, and the fulfillment of this contract he can in no way avoid if the other party thereto demands his right. He has made a commercial agreement which he must carry out, and has made it under conditions which as absolutely bind him, or his agents for him, as is bound the man who buys a piece of real estate by paying a third of the consideration down and undertaking to pay the balance at its agreed maturity. The mere fact that upon settlement day many of these contracts are "rung out" by a process identically that in daily practice in every clearing house in the world, can in no manner either affect the business nature of the contracts themselves or discredit their primarily legal and binding character.

Upon a board of trade A sells to B 10,000 bushels of wheat for May delivery. Later B sells the same amount


to C. Later still C sells the same amount to A. Delivery day arrives. If these three men conclude to settle by paying differences, well and good, and they form themselves into a clearing house and do so. But if B, who has bought ten other equal lots, demands the wheat from A, the latter must procure it and make the actual delivery. The fact that he has both bought and sold an equal quantity cannot relieve him from his original obligation. The clearing house method is a convenience only—it is not a release.

CAPT. EADS.

On March 8 Capt. James B. Eads died of pneumonia at Nassau, in the Bahama Islands. The career of this man has been a remarkable one. He was born at Lawrenceburg, Md., May 23, 1820, and his early education was acquired in the schools of Louisville and Cincinnati. Before he had succeeded in mastering the rudiments, however, his father experienced reverses which necessitated the boy's withdrawal from school, to which he never returned. At a very early age he developed a taste for mechanics and a fondness for experimenting with machinery, which afterwards became the ruling passion of his life. In September, 1833, when only 13 years old, he arrived in St. Louis. The steamboat on which his father with his family had embarked to seek a home farther West had burned and the family was destitute. Young Eads sold apples on the streets to contribute something to the support of himself. After a short time he obtained a position with a firm, Barrett Williams, the senior partner of which, discovered his mechanical tastes, and gave him free access to his library. After a year or two he went on a steamboat as a clerk, and remained two years, during which period he obtained a valuable fund of information concerning the river. In 1842 he entered into partnership with Case & Nelson, boat-builders, for the purpose of recovering steamboats and cargoes which had been wrecked. At first the operations of the firm were limited, their machinery and appliances being very primitive and quite inadequate to the work they undertook to perform. Such were the energy, versatility, and industry of Mr. Eads, however, that the business rapidly expanded, until in the space of about ten years the firm's property had increased to \$500,000 in value. In the meantime Mr. Eads had established a factory at St. Louis for the manufacture of glassware. The business did not prove remunerative, and he returned to the wrecking business. In 1855-'56 he submitted to Congress a proposition to keep the Western rivers open for a term of years by removing all obstructions, and keep the channels free.

The bill embodying his proposal passed the House, but was defeated in the Senate. He retired from active business in 1857 on account of ill health. During the war he took ground against the levying of contributions on Southern sympathizers, and headed a movement to raise a fund to take the place of that which the military authorities had determined to exact from the friends of the Confederacy in St. Louis. Mr. Eads received the contract for building the first seven vessels of the Mississippi gunboat flotilla. From the close of the war to the time of construction of the great St. Louis bridge Mr. Eads was engaged in no great public works. Upon that bridge his fame as an engineer was firmly established. The bridge project was first conceived in 1839. Various sites were selected for the bridge, and the project met with varying fortunes until Mr. Eads began to take an active interest in it in 1867. In that year he was elected Engineer-in-Chief of the company then formed. He at once secured the services of Col. Henry Flad, and proceeded to develop plans which were subsequently followed when the bridge was constructed. It was completed and opened in 1874. In 1875 Mr. Eads began the construction of a system of jetties for increasing the depth of the water at the mouth of the Mississippi under contract with the government.

His plans when proposed were scouted at first by prominent engineers, but proved eminently successful. His last great project was the Tehuantepec Ship Canal. Mr. Eads was married in 1845 to Martha N. Dillon, daughter of Patrick M. Dillon. His wife died in 1852. He was again married to his present wife, Mrs. Eunice S. Eads. He has five daughters, three of whom married, respectively, John A. Ubsdell, of New York; Estelle McHenry, Assistant Postmaster of St. Louis; and James F. Howe, of St. Louis, Secretary and Treasurer of the Wabash Western Railway Company. Mr. Eads was granted the degree of LL.D. at the Missouri State University. He was identified with St. Louis business from the time of his arrival there as a boy.



INCIDENTALS.

One of the oldest bucket shops in this city has sold out. The Bohemian oats bill has passed in the Michigan Legislature.

Atchison, Kan., does \$5,000,000 worth of business in grain annually.

Thirty years ago the United States raised only 100,000,000 bushels of wheat per annum.

Seven-tenths of the dry portion of corn is pure starch, and starch forms about four-fifths of all human food.

The Cincinnati *Price Current* estimates the exportable surplus of wheat for the next four months at 50,000,000 bushels.

The act of the Kansas Legislature prohibiting pooling or agreement by individuals or corporations as to the price to be paid for grain, was approved by the governor March 5.

The exports of wheat and flour from the United States for eight months, ending February 28, were 99,754,487 bushels, against 52,613,917 bushels the same time last year.

A Londoner named Bear writes to a New York commercial journal that Great Britain will need to import 100,000,000 bushels of wheat before August. This makes Bear a bull on the market.

Dr. Sturtevant concludes that the principal reason for the failure of the corn crop in different sections is due to the use of poor seed. He urges artificial drying of all seed corn as soon as husked.

Henry Clews pays \$8 per square foot rent for his offices in New York, and has the finest and most elegantly fitted up apartments of any in the stock or grain business. His rent costs him almost \$20,000 per year.

English experts say that wheat has recently been grown at a loss all the world over, with the possible exception of India. They are certain that the British farmer is losing money by selling wheat at present quotations.

The New York elevator men claim that if the fees for elevating and handling included, are reduced below one cent per bushel, they will be obliged to go out of business. The boatmen, on the other hand, claim that even at three-quarters of a cent per bushel the elevators can make stacks of money.

A bill has been introduced in the Dakota Legislature providing for the condemnation of land adjoining side-tracks of railroads for the purpose of construction of warehouses and elevators by private individuals. This is a blow at the elevator and warehouse system supported by railroads.

The *Commercial Bulletin* of Minneapolis, says: It is acknowledged by country merchants that the commission merchants of Minneapolis are the most honorable and just of any in the Northwest. There are some "black sheep" among them, of course, but the Produce Exchange has no fellowship with such, so that if shippers are defrauded it is their own fault.

Says the *Pioneer Press*: "The levying by the French government of an import duty of 26 cents a bushel on American wheat is a gross outrage from a liberal trade standpoint; but then no American protectionist ought to utter a word of complaint, for the Frenchmen are only giving us the regular, much-lauded dose of genuine protection medicine."

The product of oats in the United States for 1886 was 624,000,000 bushels, 5,000,000 less than last year. The area in oats was upwards of 23,000,000 acres, producing a value on the farm of \$186,000,000. The average yield is 26.4 bushels in 1886, against 27.6 the year previous. The average value of oats is 29.8 cents per bushels, as compared with 28.5 cents in 1885.

Chicago elevators and vessels contained last Saturday evening 12,630,973 bushels of wheat, 8,170,529 bushels of corn, 1,062,458 bushels of oats, 159,316 bushels of rye, and 205,870 bushels of barley; total, 22,229,151 bushels of all kinds of grain, against 18,349,420 bushels a year ago. For the same date the Secretary of the Chicago Board of Trade states the visible supply of grain in the United States and Canada as 54,273,178 bushels of wheat, 15,523,596 bushels

of corn, 4,366,446 bushels of oats, 400,966 bushels of rye, and 1,724,841 bushels of barley. These figures are smaller than the corresponding ones a week ago by 1,508,416 in wheat and 210,751 in corn. The visible supply of wheat for the corresponding week a year ago decreased 418,711 bushels.

A daily paper of this city remarks: The writer yesterday saw a memorandum of the sale of 100,000 bushels of cash wheat of 1867. The purchase was by the then well-known firm of Rumsey Bros. The price paid was \$207,600. The same quantity and quality could be paid for to-day with \$80,000, yet the bears now are shouting "corner" and making a terrible ado.

Kansas City *Times*: "A system which encourages gambling in grain and stocks, based entirely upon quotations, deserves the serious attention of the Legislature, and public opinion should be instructed as to what the system really is. So little is known of it that the business of the bucket shops is not uncommonly charged to boards of trade and other regular commercial exchanges."

Here is a likely story from Indiana: Fifteen years ago Jefferson Miller, of Jeffersonville, Ind., while feeding a threshing machine, saw a rat run across the barn floor. In turning to watch the rat he permitted his left hand to be pulled into the machine, and it was torn off. The other day while again feeding a threshing machine in the same barn a rat ran between his feet. He kicked at it, and slipped, and his right hand was caught and torn off.

The freight agents of the Iowa, Minnesota and Dakota lines have completed the work of arranging rates from junction points to through points out of their territory to conform with their through rates to Council Bluffs, Sioux City and St. Paul. Flour and grain rates cannot be regulated until the Northwestern roads reach a compromise on the through flour rates from St. Paul and Minneapolis to Chicago.

The grain inspection at Chicago during February was 255 cars winter and 804 cars spring wheat, 2,877 cars corn, 2,800 cars oats, 91 cars rye, and 1,021 cars barley—a total of 7,848 cars. For the same month in 1886 the inspection was 170 cars winter and 848 cars spring wheat, 6,856 cars corn, 3,302 cars oats, 94 cars rye, and 1,191 cars barley—a total of 12,461 cars, or 4,613 cars more than the same month this year.

Mr. William H. Trafton, one of the oldest commercial reporters on the New York Produce Exchange, and one of the best informed men on the wheat situation in this city, stated that England must take 1,600,000 bushels of wheat per week from now until the 1st of August, and she was going to find hard work to get it from any other source than the Atlantic coast. We suggested that that meant \$1 for wheat ere long. He said: "It is my opinion you will see it past the dollar mark before the 1st of June." A good many others think the same.—*American Grocer*.

The New York Produce Exchange will make a magnificent exhibit of American cereals in the American Exhibition, which opens in London on the 2d of May. Franklin Edson, formerly Mayor of New York, now Chairman of the Committee on Grain, Evan Thomas and E. L. Livermore, an old New York merchant, constitute the committee on finance. The chief purpose is to make foreigners acquainted with the many products from Indian corn, and thus develop a large export trade. The intention is to build a special pavilion, two stories high, and illustrate the grain-lifting and grain-cleaning processes, and among the exhibits show all samples, grades and products of grain, liquid and solid. Charts, statistics and photographs are also to be provided. American methods of preparing food are to be illustrated in an American kitchen, with American cooks, American recipes, American oil stoves and every other detail, serving to instruct the world in the method of cheap living. Mayor Hewitt warmly favors the idea of making a corn exhibit specially attractive abroad, and the probability is that \$20,000 or \$30,000 will be expended.

Messrs. P. Risser & Sons, the well-known grain men of Onarga, Ill., write to *Daily Business* of this city as follows: "We are no friends of the bucket shops, and think the move now being made to close them is the correct thing. Still we have no sympathy for such as the Ohio 'lamb,' who says he was 'robbed by a bucket-shop sharp of your city.' To us he seems to have tried the robbing game on the bucket shops, and would have pocketed his stealings without scruples had he been able to 'hold up' his victims, as he intended and hoped. As between the bucket shops and their victims, we can see no moral difference, and could the effects of their strife be confined to themselves,

we would like to see them fight it out until one or the other is ruined; but, as has been so ably shown in the *Daily Business*, since the effect reaches the whole farming community by their market manipulations, and the innocent are the sufferers, we say 'down on the bucket shop,' and, for that matter, on all speculations in wind, wherever engaged in. We should rejoice to see the time when no one can sell what he has not got, nor buy what he has no intention to receive or pay for, without becoming liable to the law and under great penalties. The whole system is pernicious, whether managed by a clique or bucket shop, and should be discountenanced."

Says the Chicago *Mail*: "The loss comes to a 'bucket shop' invariably on the advancing market; the profits, the big profits, on the declines. The hurts received last November were the most serious ever suffered, because the whole West had a frenzy then to speculate in stocks, and the frenzy was all spent in buying. If lard and short ribs and wheat and corn were advancing alongside of pork now the losses would be much more severe. Then the whole bucket-shop clientele would be making money and the losses probably could hardly be set out in five figures. There are two men whom the bucket shops regard with especial dread. Leopold Bloom is one and Ira Holmes is the other. They are held in this especial reverence because they are 'plungers.' They press their luck with such energy and nerve that when the tide is their way terror is in the heart of the fellow who is bound to pay their profits. Holmes is already barred at one of the big 'shops'—the Palmer House. Both would probably be limited if they attempted now to take 5,000 to 10,000 barrels of pork in any of the establishments. Leopold Bloom's method is a peculiar one. All that he asks of a market is that it should have some momentum. He wants to see it well started, either up or down, then he gets aboard. It, of course, takes as good judgment to decide whether a market is well started as it does to decide any other point. For instance, if Bloom had his eye upon wheat and it was advancing, he might not want to buy it all at 78 cents, nor even at 79 cents; but he would probably be decided when it had got to 80 cents. Most operators would give up any idea of buying at 80 and regret simply that they had not caught on at 78. That is where Bloom's system differs from most others. His whole speculative theory is based on that great law of nature, that 'a body once started tends to move on in a straight line.'"

THE NEW YORK CANALS.

Receipts of grain at New York during seven months of navigation, viz., May to November, 1886, inclusive, were: By canal, 43,619,355 bushels; by rail, 31,986,766; by river and coastwise, 765,116. Total, 76,371,237 bushels. The above figures show that during the season of navigation in 1886 the canals delivered at New York 11,632,389 bushels of grain more than the railroads, and 10,867,473 bushels more than were received by all other routes combined.

Total receipts during seven months of navigation for past three years, 1884, 1885, 1886: By canal, 110,550,458 bushels; by rail, 92,440,154 bushels; by river, coastwise, etc., 3,555,621 bushels; total, 206,546,233 bushels. These figures prove that the canal alone brought 14,554,683 bushels of grain more than all other routes to New York for the above period. In other words, the canal brought during the season of navigation 7,277,342 bushels more than half of the aggregate amount received.

Comparison of the receipts of grain for the entire years 1885 and 1886: By rail, 1885, 65,563,023 bushels; 1886, 50,200,235 bushels; decrease in 1886, 6,362,788 bushels; by river, coastwise, etc., 1885, 2,929,656 bushels; 1886, 1,204,039 bushels; decrease in 1886, 1,725,617 bushels; by canal, 1886, 43,995,855 bushels; 1885, 29,926,879 bushels; increase in 1886, 14,068,976 bushels. The above figures show that while receipts by all other routes fell off largely, those by canal were greatly increased, thereby saving to New York millions of bushels which would possibly have gone elsewhere, because of lower rates by rail. In other words, the grain business of New York for 1886, were it not for the canal, would have run several million bushels behind the year 1885.

Receipts of grain for 1886 at Philadelphia, 17,236,078 bushels; Baltimore, 29,360,141; Boston, 19,861,826; three ports combined, 66,458,045; New York, canal, 43,995,855; rail, 50,200,235; coastwise, etc., 1,204,039; total, 104,400,129 bushels. This shows that the receipts at New York by canal exceed the aggregate receipts of Philadelphia and Boston for the entire year, and are only 22,462,190 bushels less in seven months than the total amount re-

ceived at the three ports combined for twelve months. The aggregate receipts at New York exceed the combined receipts of Philadelphia, Baltimore, and Boston by 37,942,084 bushels, while without the canal receipts New York would be behind 12,053,771 bushels.

Receipts of grain at competing ports during season of navigation compared with receipts when navigation is closed:

	Philada. Bush.	Baltimore. Bush.	Boston. Bush.	3 ports combined. Bush.	New York. Bush.
Open...	11,554,663	16,822,309	11,958,418	40,335,390	76,371,237
Closed...	5,681,415	12,537,832	7,913,408	26,122,655	28,182,892

A glance at the above figures will show that while the canals are open and directing the channels of trade toward New York, that city is the center of the grain trade; when they are closed the competing ports more than hold their own.

ELEVATOR CHARGES.

[Address of Capt. DePuy before the Canal Committee of the New York Legislature:]

When the late Commodore Vanderbilt's prediction that he would live to see grass grow in the bed of the Erie Canal was about to prove true, no one asked me to come from Illinois and rescue the state of New York from the grasp of railroad greed; no one asked me to come here and save the Empire State from ruin and destruction. I was not asked by anyone to come to New York and show the boatmen how to move two boats with one crew. And gentlemen, it is not at the request of elevator owners that I appear before you to-day. But I hope it will be the last time that anyone will have to come to Albany to plead before legislative committees that the elevator owners are in league with the railroads to cripple and take every possible advantage of canal commerce.

When I came back to this, my native state, after an absence of twenty-three years in Illinois, I told the people on the streets and through the press that by this double-boat system the Erie boatmen could bankrupt every trunk line that was competing against them if they had an equal show in terminal charges.

Now, gentlemen, would the railroad owners allow the Erie Canal to have any advantage over them in terminal charges? No, sir! But they hold an advantage over the Erie boatmen of 4½ cents a bushel. The difference amounts to \$1,870,000 just on the amount of grain shipped by canal last season. I prove this startling assertion by the following exhibits:

BUFFALO CR. PER 1,000 BUSHELS.	
After paying the trimmers, they have.....	\$ 8.75
DR.	
Running expenses—	
To transfer 1,000 bushels.....	44 cents
Sundries.....	31 cents
Total expense.....	75
People's money.....	\$ 8.00
NEW YORK CR. PER 1,000 BUSHELS.	
After paying the trimmers, they have.....	\$ 14.50
CR.	
Running expenses—	
To transfer 1,000 bushels.....	90 cents
Sundries.....	35 cents
Total expense.....	\$1.25
People's money.....	\$13.25
Adding the two together equals \$21.25 per 1,000 bushels.	

Now, gentlemen, that money is actually extorted from canal commerce and belongs to the people. And, gentlemen, this is a double-acting purchase the railroads have exercised over the people.

When the railroad elevator monopolies take that \$21.25 they are that much richer and the people are \$21.25 loser—making a difference in favor of the railroads of \$42.50 per 1,000 bushels. Thus I prove where they hold an advantage over the Erie boatmen 4½ cents per bushel, and the fact that the boatmen actually delivered over 44,000,000 bushels grain in New York last season against this odds, and at a very low rate of freight, confirms the prediction of the Commodore from the Parrie state that by the double boat system the Erie Canal is capable of bankrupting its principal competitors if it was not slaughtered by its terminal charges.

Now, the object of expending about \$5,000,000 on the Erie Canal is simply to reduce the tax on a bushel of wheat through the state about 1½ cents per bushel, and there is no question but it will be a paying investment for the people. By comparison: The first improvement to the Erie Canal cost nearly \$38,000,000, to increase the capacity of the boat only 160 tons; while by the system I

have introduced it will only cost about \$5,000,000 to increase the capacity of the boats 360 tons.

Now to condense my statement: The tax on wheat through the Erie Canal can be reduced 1½ cents per bushel by lengthening the locks and putting two feet more water in the canal, at an expense of \$5,000,000. You can reduce tax 1½ cents per bushel by running state elevators on the state's account. I would advise having the state own two large storage and transfer elevators in Buffalo, and about four good floating elevators in New York. One competent man can oversee both elevators in Buffalo, and put another good man in charge of the floaters in New York. In my opinion \$500,000 expended in state elevators will benefit the people more than \$5,000,000 will expended on canal improvements. My judgment has always been to have the canal self-supporting, and correct the abuses in terminal charges.

It is conceded by all sailor men that New York is the dearest port in America; and the quicker kind Providence removes some of the old fogies who think New York is the only seaport on the Atlantic coast, the better it will be for the state of New York. The press of New York has published volumes about the exorbitant port charges levied on commerce passing through the port of New York.

Two years ago the *Commercial Bulletin* published an account of the ships "Flourine" and "Allumnia" being loaded with grain in Philadelphia, and that entire port charges on each ship was only \$46. And the same brokers paid to load a ship of the same size in Brooklyn \$294.

POWERS OF THE INTER-STATE COMMISSIONERS.

The following is a concise statement of the powers of the commissioners under the new Inter-State Commerce Bill:

1. To inquire into the management of the business of lines subject to the act, and obtain such information as it may need.
2. To subpoena witnesses and require the production of books and papers. If a subpoena is not obeyed, any circuit court may make an order accordingly, and failure to obey the order is contempt of court.
3. To investigate complaints, and notify carriers. The notification of changes filed must precede investigation.
4. To serve carriers with copies of reports whenever the same charge unlawful acts, together with notice to cease the acts complained of, or make reparation.
5. To apply to the circuit court in case of a failure to obey the requirements made. The reports are *prima facie* evidence on the hearing. An injunction shall issue whenever the lawful order or requirement of the commissioner shall appear to have been disregarded. Failure to obey an injunction may subject the offender to a fine not exceeding \$500 a day. An appeal to the supreme court lies when the sum of \$2,000 or more is involved.
6. To require annual reports from all common carriers. This does not compel the carrier to make a report until it is required.
7. To require, in its discretion, a uniform system of keeping accounts.

MINNESOTA GRAIN REGULATIONS.

The provisions of the compromise grain bill passed by the Minnesota Legislature are as follows: Whenever any railway company doing business in this state shall be unable, from any reasonable cause, to furnish cars at any railway station or sidetrack in accordance with the demands made by all persons demanding cars at such stations or sidetracks for the shipment of grain, such cars as are furnished shall be divided as equally as can be among the applicants, regardless of the number applied for, or capacity of elevators, warehouses, or amount of grain awaiting shipment at such stations and sidetracks. It shall be unlawful for any person, corporation, or association of persons doing business in this state to issue any wheat receipt or wheat ticket describing wheat by grade, other than grades prescribed by railroad and warehouse commissioners, known as Minnesota state grades. Any person, or railway official or agent, who shall willfully neglect or refuse to comply with the provisions of this act, shall, upon conviction thereof, for the first offense be subject to a fine of \$50; for every subsequent violation of the provisions of this act, shall, upon conviction thereof, be liable to a fine of \$100 and imprisonment in the county jail for a period of not less than thirty nor more than ninety days. Actions may be brought before any justice

of the peace in the county wherein the offense is committed, and shall be prosecuted by the county attorney at the expense of the state. All laws or parts of laws inconsistent with this act are hereby repealed.

STATE INSPECTION OF GRAIN.

A bill has just been introduced in the Senate which proposes to regulate the inspection and grading of grain in New York. The bill is a radical one for the grain men here, inasmuch as it aims to put grading on a different footing altogether from the present one. It provides that no person shall act as an inspector-in-chief, deputy, or other inspector for any board of trade or produce exchange within this state who has not first qualified, and no such inspector can be a member of any board of trade or produce exchange, or be interested in any transactions carried on in those organizations without being liable to fine and imprisonment. Such inspector must give bond, etc., in the sum of \$50,000 that he will faithfully discharge his duties, and that he will pay all loss or damage caused by reason of his neglect, refusal, or failure to perform his duties. The bill also provides that no board of trade, etc., shall modify or change any such standard grade of any grain oftener than once in six months, except after thirty days' notice. These are some of the more important provisions, which, it may be added, are not regarded favorably by the New York Produce Exchange.—*Bradstreet's*.

ILLINOIS GRAIN INSPECTION.

A petition to the Illinois Legislature in regard to the inspection of grain is being circulated extensively for signatures by farmers as well as merchants in this state. It alleges that a rigid and uneven grading by the State Inspectors prevents the free selling of grain to arrive, and forces shippers as a matter of self-protection to make most of their purchases on the basis of a quality below the speculative grade. This difference is stated to amount to "millions of dollars annually," the loss being borne by the farmers and merchants. The petition also states that of the seven men who have held the position of Chief Inspector during the last fifteen years not one of them had any practical experience in the grading or handling of grain previous to his appointment, and that no sooner had one of them learned something tending to the intelligent discharge of his duties than he was rotated out of office to make room for a new man. It claims that the going into force of the Inter-State Commerce Bill will render it practically desirable that there be a change in the management of the inspection, and asks the legislature to make the change by relegating the business to the Board of Trade of this city.

"THE SINKING OF THE CUMBERLAND."

A member of the Detroit grain trade was the author of the following interesting lines, anent the recent sinking of the propeller Cumberland in that harbor last Saturday, having a cargo of 70,000 bushels of wheat, 40,000 bushels of which belonged to McIntyre & Wardwell, of that city, and was fully insured:

One chilly morn in '87,
As o'er the river passed
The ferryboat from Walkersville,
The captain saw a mast
Wave to and fro in agony,
As though there was a cramp
Down in its deep hold's stomach,
Where the wheat was getting damp.

The ripples from its shaking sides
Flow o'er the glassy river
As through its huge frame suddenly
There passed a mighty shiver;
And then there came a swashing sound,
Clearly heard from bank to bank,
And to the bottom of the stream
That "A 1" vessel sank.

But there was a good insurance
On that block of Wendell's grain,
And never more will that old wheat
Grade No. 2 again.
It can't be used for flour,
And it won't be used for grub,
But it'll all be bought by Walker
To make good old "Walker Club."

The Army of "the Cumberland"
(A squad of rats, you know)
Have passed into the vista
Of the dead past long ago.
The weevil and the "dry" rot
In that wheat can work no ill,
Thank God; we've got the Hessian fly
And the cut-worm with us still.

ELEVATOR AND GRAIN NEWS

Knoxville, Tenn., is to have a grain elevator.

An elevator costing \$5,000 will be built at Eden, Dak.

A \$75,000 brewery is to be built at Montgomery, Ala.

A starch factory is to be built at Nebraska City, Neb.

E. Koch, of New Orleans, La., is enlarging his distillery.

A hominy mill is to be erected at South Hutchinson, Kan.

L. Sahlman, hay, grain etc., Charleston, S. C., has assigned.

F. M. Coffelt, grain dealer at Ontario, Iowa, has assigned.

Bryant & Co., grain brokers at Kansas City, Mo., have suspended.

T. Milner, dealer in groceries and grain at Brampton, Ont., is dead.

The grain buyers at Covel, Ill., have been doing a land-office business.

A bonus of \$700 has been raised at Perrin, Mich., for a grain elevator.

Ingersoll & Co., dealers in grain, etc., Nashville, Mich., have dissolved.

A grain elevator will be erected at Canton, Dak., the coming spring.

T. Meagher, of Mobile, Ala., contemplates erecting a grain elevator.

A Bridgeport, Conn., man will erect a brewery at Birmingham, Ala.

Canton, Ohio, is very anxious that some one should build her an elevator.

Geo. J. Fritz, of St. Louis, Mo., lately sold a six-boiler patent beam-doctor.

Rosencrans Bros., dealers in grain, etc., at Ruthven, Iowa, have dissolved.

George H. Bolsby, grain dealer at New Orleans, La., has become insolvent.

William A. Plaisted, grain and flour merchant of Portsmouth, N. H., is dead.

The flour and feed firm of R. Covert, at Hastings, Neb., is now Covert & Stine.

George R. Houghton, grain commission merchant, etc., Chicago, has suspended.

Hiram M. Cox and A. P. Marsh, Deerfield, Me., will establish a corn factory.

W. H. Minor, grain dealer at New Philadelphia, Ill., is closing out his business.

The grain firm of R. Connell & Co., at Phillips Station, Neb., has sold out.

H. C. Wright is successor to Wright & Co. in the grain business at Schuyler, Neb.

The erection of an elevator is contemplated on the Little Falls and Dakota Road.

The Johnson Elevator, at Solomon City, Kan., will soon be sold under mortgage.

The farmers of Gary, Dak., intend building a warehouse in their own behalf soon.

Messrs. Lockabill & Co. contemplate enlarging their distillery in Chester county, S. C.

J. S. Van Dorn, grain and coal merchant, has removed from Cromwell to Riverton, Iowa.

A brewery is contemplated at Little Rock, Ark. John A. Pirtle, of that city, is interested.

The farmers of Hillsboro, Dak., propose to erect a 75,000-bushel elevator for their own use.

The Farmers' Union, of Oakland, Neb., are about to build an elevator for their own benefit.

E. F. Branch, proprietor of the grain elevator at Martinsville, Ind., has made an assignment.

The Farmers' Alliance, of Cifton, Kan., are preparing to build a \$10,000 elevator at that place.

A. K. Shepard & Co. will establish themselves in the grain business at Duluth, Minn., shortly.

If the town of Cullison, Kan., will furnish the lot, M. E. Orr will build an elevator in that town.

Welborne & Freeman, grain and lumber dealers at Roanoke, Tex., have dissolved partnership.

Geo. J. Fritz, of St. Louis, Mo., recently sold a 6-horse power engine to a book bindery of that city.

John Roberts & Co. are successors to John Roberts in the grain and lumber business at Carman, Ill.

C. T. Howe, a grain dealer in this city, failed for a small amount during the recent drop in wheat.

Geo. J. Fritz, of the Central Iron Works, St. Louis, Mo., writes us that work in the millers' roll regrinding

and recorrigating department is very brisk, as he is putting in the "Beall" patent corrugation.

Tompkins & Harris, grain commissioners and brokers, of New York City, have made an assignment.

A large clay crusher was shipped this month to Memphis, Tenn., by Geo. J. Fritz, of St. Louis, Mo.

Geo. J. Fritz, St. Louis, Mo., lately fitted out a laundry in that city with pulleys, shafting and machinery.

Geo. J. Fritz, St. Louis, Mo., has recently sold a 60-horse power engine to an establishment in that city.

The store of M. Higgins, groceries, grain, etc., at Dana, Iowa, has changed its name to that of Higgins & Maloney.

Green, Gold & Co., grain dealers at Hillsboro, Dak., have been succeeded by the North Dakota Roller Mill Co.

Devries & Peterson, flour, feed and grain dealers at Omaha, Neb., have been succeeded by Peterson & Carper.

The Seattle Flour Mills and Elevator Co. have incorporated at Seattle, Wash. Ter., with a capital stock of \$75,000.

A St. Louis establishment, some days ago, purchased a two-boiler patent eccentric doctor, of Geo. J. Fritz, of that city.

Geo. J. Fritz, of St. Louis, Mo., recently furnished shafting, pulleys, hangers, etc., to a supply house of that city.

Geo. J. Fritz, of St. Louis, recently furnished a new governor, pulleys, shafting and supplies for a new mill in Texas.

The Columbia Co-operative Brewing Co. have been licensed to incorporate at Chicago, Ill. Capital stock \$100,000.

Messrs. Wirt & Barber, of Holdrege, Neb., so Mr. Barber writes us, elevator and grain men, have sold out their business.

Among the February shipments of Geo. J. Fritz, St. Louis, Mo., was a 4-inch relief valve for a cotton press at Wilmington, N. C.

Jackson Weeks has retired from the flour and grain firm of A. J. Bird & Co., at Rockland, Me., and H. G. Bird has been admitted.

Barger, Rizer & Co., a milling firm at Nickerson, Kan., will soon commence the erection of a \$5,000 elevator with a capacity of 20,000 bushels.

The elevator of Geo. A. Seaverns, in this city, known as Alton Elevator "B," has been made "regular" for grain, by the Chicago Board of Trade.

Bryant & Co.'s bucket shop, at Kansas City, Mo., a branch of the Chicago concern, failed Feb. 28, a rise in pork being the cause of failure.

The San Antonio Brewing Association, San Antonio, Tex., has bought the City Brewery for \$45,000, and will repair it and put it in operation.

Shellebargers, Bowers & Moores will erect a new elevator at Cerro Gordo, Ill., a need which will add largely to their grain handling facilities.

One of Milwaukee's grain firms has received an inquiry from an agent of the German government at New York as to terms for 200,000 bushels of oats.

C. A. Pound and others have incorporated the Longmont Farmers' Milling and Elevator Company, with a capital stock of \$75,000, at Longmont, Col.

The Collier Elevator, run by the Merchant's Elevator Co., has been declared regular by the Exchange, and its certificates will be recognized as such in the future.

Lewis J. Kroll and his former partner, Richard Wright, grain dealers of Baltimore, Md., have been adjudged insolvent, and their affairs placed in the hands of a trustee.

The firm of C. W. Brega & Co., grain and commission merchants, Chicago and New York, have sold out their New York branch, and are succeeded by Harmon, Spruance & Co.

The Cedarburg Elevator Co., of Milwaukee, Wis., has filed articles of incorporation. Capital stock \$40,000. Incorporators, S. M. Williams, Fred W. Henderson and S. L. Henderson.

Messrs E. C. Buchanan & Co., of Memphis, Tenn., write us that they have discontinued their commission business and will, in the future, confine themselves to the handling of their own grain.

Articles of association for the Tower City, Dak., Brewing Association have been signed for the establishment of a brewery at that place in the early spring. Work will commence on the buildings as soon as the frost is out of the ground. The site of the buildings has not been agreed upon as yet.

A \$100,000 elevator company has been organized at Newburgh, N. Y., with E. T. Skidmore as president, Garrett Van Nostrand, secretary and treasurer. Directors, Homer Ramsdell, Daniel S. Waring, John Dales, E. T. Skidmore, William B. Brooks, Samuel C. Mills and Garrett Van Nostrand.

Judgments were filed in the circuit court against James R. and William Butlers, grain and oil dealers of Ottawa, Ill., Feb. 16, on notes of \$3,000 in favor of the National City Bank and \$3,500 in favor of the First National, also one of \$1,000 against James R. Butlers, individually, in favor of the National City Bank.

The foreign trade of Newport News is developing very fast, the total value of foreign exports from there from Feb. 3 to March 3 inclusive having been over \$1,600,000. The principal articles exported during that time were 379,310 bushels of wheat, 59,200 bushels of corn, 6,950 barrels of

flour, and 22,999 bales of cotton. A contract has been signed for the building of a large dry-dock and the necessary machine shops at Newport News, Mr. Simpson, the builder of the Baltimore dry-dock, having received the contract.

Col. J. A. Closser, a prominent grain merchant of Indianapolis, Ind., died of congestion of the lungs Feb. 23, aged 48 years. He was formerly of Laporte, coming to Indianapolis for permanent residence fourteen years ago. Col. Closser served as colonel of the 1st regiment of state artillery during the late rebellion.

A firm here controlling thirty elevators in Nebraska reports enormously large corn deliveries from farmers' hands this week, and with Western railroads offering very low rates from Missouri River points it is regarded as certain that large amounts of corn will be shipped during the next twenty days that has been sold for May delivery. —Daily Business.

Some little excitement has been created among the members of the Board of Trade by the appearance of strangely-worded circulars and pamphlets advertising the business of a new firm that has taken quarters in the Rialto Building. The style of the firm is Richard Oliver & Co., but it seems that the man at the head of the business is one A. C. Smith. In his pamphlet, which is supposed to contain the best possible information on how to speculate, he claims to have discovered something to take the place of "puts and calls," which have been abolished on both Boards of Trade. He calls this the "new option deal," which permits the speculator to name a future day and put up his money on that day's market. The money, of course, is to be deposited with Richard Oliver & Co., the minimum limit being \$10. The scheme is said to be somewhat similar to the famous "Fund W" scheme, and just as capable of being operated to defraud the public.

Says the Fargo (Dak.) *Argus*: A gentleman conversant with the construction of elevators states that a 5,000 bushel horse-power elevator can be constructed for almost \$1,500, and a 10,000-bushel crib house, with cleaners, for \$2,500; a 20,000-bushel steam power elevator, with scales and spouts, and all equipments for handling grain, for \$5,000. If farmers would combine and erect elevators on their premises—away from the railroad—and keep their No. 1 hard, it would not be long before the Eastern millers would "come a-runnin'" for the grain. They must have it, and it is only necessary for the wheat-growers to hold their products to get an advance on quotations. The legislature should take immediate action and create a corporation law for the purpose of erecting these elevators, authorizing them to give bonds for building purposes. Under proper restrictions this would be a safe investment, and the money necessary could be obtained.

THE NEW YORK PRODUCE EXCHANGE'S ASSESSMENT SCHEME.

We notice that the New York Produce Exchange has had a trouble in its death payment scheme—\$3 assessment upon the survivors on death of a member, with stipulated amount to be paid increasing annually in first nine years of membership. The deaths among older members demonstrated the fallacy of the scheme, it seems, even before it was shown that \$3 could not pay \$5 or \$6, etc., though with the advantage of having but \$2 to pay at the start. It is now, we believe, proposed to pay heirs of the deceased only the amount of assessments he has paid into the fund, which converts the "gratuity" into a *quid pro quo* savings bank with not a bit of fallacy in it; and with this the members will be able to understand what they are doing, and age 30 will not be paying as if 60 years old, and receiving as if 15 years old.

Such an expedient would put a stop to all assessing of age 30 for age 60, or age 60 for age 30, and would put a stop to the inherent fraud in graduated age assessments. There ought to be some one in such societies with sufficient knowledge of accounts to comprehend that age 30 can not pay for age 60, or age 60 for age 30 in any way without misdealing, deception, or worse. Even if a society mortality were exactly like an insurance mortality table, such table would not be adapted to assessmentism. To put this matter in its very simplest form, say for equal death payment, Jones, assessment \$6; Brown, assessment \$8; Smith, assessment \$10; and Brown dies. By his own order of death cost rating Brown is \$8. Jones pays \$6 for account of Brown's death, and Smith \$10.

So far, therefore, as co-operativism has got, it appears to be a death contributionship method, available under limited range of age, and only uniform assessment for the same death. Equal assessment is equity and the only equity. Age approximations may co-operate with justice to each; great age diversities can not co-operate. There must be absolutely equal co-operation, not merely relative, for equal result. So with, say, three classes of associates, class A, ages 20 to 29, class B, ages 30 to 39, class C, ages 40 to 49, each class paying only for the deaths which occur in the class, the method will be reduced to the minimum of illusion and evil. Any assessment sum per member can be adopted according to the circumstances of the membership. We presume that by this time it is understood that if 1,000 persons get together for the purpose of paying \$2,000 upon the death of each one of their number they must pay \$2 each upon each death, and if it is stipulated that \$4,000 be paid to the beneficiaries of each decedent, \$4 must be paid by each member upon each death—a small margin can be added to each assessment to provide for diminution in the class number and for expenses.

THE AMERICAN ELEVATOR AND GRAIN TRADE.

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ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., MARCH 15, 1887.

EXPORTS OF BREADSTUFFS.

The report of the Bureau of Statistics on the exports of breadstuffs, issued March 9 for the month of February, shows an increase and a decrease in some of the commodities over that of like period of last year. The total value of breadstuffs exported during February, 1887, was \$11,881,446, against \$10,105,157 for February, 1886. The value of the exports for the eight months ending Feb. 28, 1887, was over \$32,209,164 in excess of the eight months ending Feb. 28, 1886.

In 1886 the total number of bushels of corn were 6,186,051, while in 1887 there were 3,945,095, showing a decrease of 2,241,956. Barley, oats and rye show an increase over that of last year. Barley, in 1887, 24,303 bushels, against 20,404 in 1886; oats, 28,798, against 26,929, and rye, 24,986, against 14,518. Wheat still shows a gain, being 5,892,453 bushels, against 5,058,107, showing an increase of 834,296 bushels over the same month in 1886.

THE BUCKET SHOP MUST GO.

Much has been done in the past two months in educating public sentiment against that evil of evils, the bucket shop. The public press has lifted up its voice in condemnation, and the legislatures of several states have before them on passage laws which, it is hoped, will effectually wipe out this species of gambling. While the press is now thoroughly aroused on the subject, it is but just to say that *Daily Business*, of this city, commenced the preaching of the crusade and has kept it up, dealing valiant blows and showing what an instrument for the depression and destruction of business the bucket shop is.

Note the showing made in the article from *Bradstreet's*, published on another page. It is the bucket shop that is sucking the life out of legitimate business and paralyzing every effort which the market makes toward recuperation.

In the Illinois legislature a bill is on passage which, it is hoped, will annihilate the the bucket-shop business in this state. The first section describes the business as the pretended buying or selling of the kinds of property named on margins, when there is no intention of delivering or receiving the property. This business is declared unlawful, and any one engaging in it as the keeper of a bucket shop is made liable to a fine of \$200 to \$500 for the first offense, and to imprisonment for six months for the second offense. The

section declares bucket-shop dealings to be gambling and criminal acts, and prescribes a penalty of \$100 to \$500 for any one committing them for each offense. This is aimed at the patrons of bucket shops, apparently, as well as at the keepers of those establishments. There is little doubt but that the bill will pass. It ought to. The bucket shop must go.

THE CANALS.

The persistent opposition made to the canals by corporate interests shows how valuable the canals are to the public at large. If the canals were in a state of decay, as the champions of the railroads assert, no such opposition would be manifested. If the Erie Canal had not cut into the business of the New York roads Vanderbilt would not have attempted to wreck it. The bankrupt condition of the Chesapeake & Ohio Canal has formed the text for a number of discourses in monopoly papers on the "decay of canals." These self-same papers do not call attention to the business done by the Erie the past year. The exhibit made on another page as to the trade on the Erie last year is a sufficient answer to the howl about the decay of the canals. The Chesapeake & Ohio's failure has been due to mismanagement. It got into politics, and that killed it, as much as anything. That useless canals have been dug, all will admit, but that is no answer to the claim that canals so located that commerce can avail itself of them are the best regulators of the railroads.

THE RIVER AND HARBOR BILL.

The annual steal, the River and Harbor Bill, failed to become a law because the President pocketed the bill, without either signature or veto. The bill provided for the expenditure of \$10,500,000, although there is now about fifteen million dollars available for improvements left over from the appropriations of former years. Compared with that famous River and Harbor Bill of \$25,000,000 which President Arthur vetoed, the bill which President Cleveland quietly choked was very moderate. But it represented the same amount of trading and log-rolling, by which money is voted for useless improvements in order to secure money for improvements which are really needed. Perhaps a few vetoes may reform this waste of public money; and legislators may be led to see that while the people are heartily in favor of devoting public money for public improvements of value, they are just as heartily opposed to its dissipation in the so-called improvement of useless creeks and unknown harbors.

NEW YORK ELEVATOR CHARGES.

With the coming of spring comes the renewal of the agitation for a reduction of the elevator charges at New York. As Mr. John Brette said in his address to the Assembly Canal Committee, the subject is a good deal of a "chestnut," but that is no reason why justice and right should not prevail. The bill before the New York legislature provides for a reduction from one cent per bushel to three-fourths of a cent per bushel for transferring and weighing the grain from the boats at New York City. Beyond a doubt, this work can be profitably done at half a cent per bushel; but the elevator men protest that they can not do it for less than a cent a bushel.

The average canal-boat load is 8,000 bushels. The charges on this for simple transfer are \$80. For trimming the same they get \$64, making a total of \$144 for each boat, for a job that only requires two or three hours time. If the demands of the boatmen were complied with, the elevator men would still get about \$120 for each boat, a sum which would leave them a handsome profit.

As Mr. Brette, editor of the *Canal Advocate*, showed in his able speech before the committee, the state has ample power to control elevator charges. Chief Justice Waite decided in the case of *Munn vs. Illinois*, that the state had just as much right to control elevator charges as those of a common carrier, ferryman or wharfinger. The boatmen have right on their side, and the New

York and Buffalo elevator rings should be brought to terms by the legislature of the Empire State.

THE INTER-STATE BILL.

The minds of railway managers seem to have undergone a revolution in regard to the probable workings of the Inter-State Commerce Bill. The Western railway managers in session at Chicago passed resolutions announcing that they would endeavor to carry out in good faith the provisions of the bill. Individual managers all over the country have declared that they believe the bill a good thing, as it will largely settle by law what the managers have endeavored to settle themselves by pools and associations, very often to no purpose. In fact, the tone of railway officials is far different from the revolutionary talk which some of them indulged in immediately after the passage of the bill. The change is gratifying, and beyond doubt the public will be better satisfied with a poor law of their own making than the legalized robbery to which the roads have often subjected them in the past.

CHICAGO GRAIN INSPECTION.

There has always been more or less dissatisfaction with Chicago grain inspection; but this dissatisfaction has been especially marked in the last six months. Complaints have come from all quarters that the inspection is altogether too strict and by no means uniform. These complaints have found voice in a petition to the legislature of Illinois, numerously signed by grain men throughout the West and Northwest, asking that the inspection of grain be relegated to the Chicago Board of Trade.

It is useless to deny that this widespread dissatisfaction has a very substantial basis in fact. Chicago is naturally the best corn market in the world, because it is a speculative market. But the country shipper cannot very well avail himself of the advantages of the Chicago market if the corn he has cribbed for May delivery is inspected No. 3 instead of No. 2 on reaching this market. Yet country shippers say that some of the same lot of corn will be differently inspected in Chicago, although the grain may be as nearly uniform as possible.

The whole trouble is that the Chief Grain Inspector is a political officer. He ought to be appointed with sole reference to his ability to select competent subordinates, and see that their work was properly done. There is no need of taking the appointment out of the hands of the Governor. It would be quite sufficient to make it obligatory on the Governor to appoint the Chief Grain Inspector from a list of names furnished by the Board of Trade. Political grain inspection has not been a success.

WE solicit communications from all who are interested in the grain trade, on subjects connected with the welfare of the craft.

SPEAKING of the state grain inspection, Mr. Geo. M. How, of this city, said: "In leaving the control of grain inspection in the hands of the state, it is driving away much of the grain that should come to Chicago. We have had a thorough trial of this system under state control, and we see no other way out of the difficulty than by having it relegated to the Board of Trade, where it rightfully belongs."

WE have received the first numbers of the *Canal Advocate*, published by John Brette, 129 Broad street, New York City. As its name indicates, the *Advocate* is devoted to the canal interests of New York, and its motto is: "Preserve the Waterways, the Shipper's Only Protection." The *Advocate* antagonizes the elevator rings at Buffalo and New York, and the railroad ring that is trying to ruin the canals. The *Advocate* is a four-page weekly, and the subscription price is \$2 per year. It deserves, and is apparently receiving, that support which the friends of our waterways should give such a journal. We have been pounding away in the same line ourselves, and the *Advocate* has our best wishes in its fight against the powers of darkness.

Editorial Mention.

UNDER the retaliatory measure adopted against Canada, grain and grain products imported from Canada will pay a duty of 35 per cent.

HON. WM. M. MORRISON, of this state, seems to be the only one, so far, who is sure of a place on the Inter-State Commerce Commission.

ALONZO RICHMOND, a well-known and public-spirited citizen of Buffalo, is dead. Mr. Richmond was well known in grain and shipping circles.

THE new French duty on wheat amounts to 26 cents per bushel instead of 16 cents as heretofore. Of course the duty is, as intended to be, prohibitive.

IN Indiana they have commenced the prosecution of some of the Bohemian-oats crooks. In fact, the people are getting after this class of sharpers with a very acutely-pointed stick.

IN all probability there will be a rush to sell wheat throughout the Northwest before spring work commences. There is always a movement of this kind when the wheat is in the country to sell.

MESSRS. GROWEG & SMITH, of Defiance, Ohio, write us: "Please send us statement every time our subscription expires, as otherwise we might overlook renewal; we do not want to do without your paper any time."

THE anti-bucket shop bill passed the Missouri Legislature with a whoop and a hurrah. Senator Jacobs, of Chillicothe, a grain dealer, handled the bill so well in the senate that there were only two votes against its passage.

GRAIN men at Peoria have taken steps toward organizing a barge line for transporting grain down the Illinois and Mississippi Rivers to the Gulf. Some of Peoria's most enterprising citizens are in the movement.

MESSRS. HOWES & EWELL, of Silver Creek, N. Y., are to issue a treatise on grain cleaning, advanced sheets of which we have been permitted to see, and from which we purpose making extracts in future issues of this paper.

A SMALL agitation has commenced in New York toward having the state build and operate elevators at Buffalo and New York. It is asserted that this would do more to increase traffic on the canals than would the widening and deepening of them.

MR. HENRY W. AVERY, of the Avery Elevator Bucket Co., called upon us the past month. The company's shops in Cleveland are now fitted up for turning out buckets of all sizes, and Mr. Avery displayed an elegant line of samples of their goods.

THE Chicago Board of Trade is discussing the advisability of having two settlement days in the month instead of only one as at present. The proposed change would be an admirable reform, and could hardly result otherwise than in stimulating trade.

MR. S. E. WORRELL, of Hannibal, Mo., so well known to the readers of the AMERICAN ELEVATOR AND GRAIN TRADE as an expert in the drying of grain, etc., is now in Chicago, where he will remain a few days, making his headquarters at Chas. Kaestner & Co.'s establishment, 303 to 311 S. Canal street, manufacturers of his dryer,

etc., and he will be pleased to meet any party or parties interested in the drying of grain, tobacco, green coffee, also "tankage," starch refuse, distillery feed, clay, brewers' wet "grains," and fibrous material.

CANALS are certainly having a revival. A new canal project has been incubating for some time to connect Lake Michigan with the Illinois River, utilizing to a large extent the present Illinois & Michigan Canal and enlarging the locks to 350 feet in length and 75 feet in width.

ONE New York bucket shop, so *Bradstreet's* tells us, has a hundred branches, and lately applied to a telegraph company for an estimate upon a system of private wires to connect the branches with the main office. It was found that such a system would require 4,000 miles of wire.

CUTTING in grain rates from St. Louis has been the fashion for some time; and it is alleged that large lots of grain have been sent East at one-half the tariff rates. The reason assigned for this slashing is that the river route has been taking so much grain that freights have become scarce.

QUITE a good suggestion is made by a correspondent of a Chicago paper that the state could profitably employ the convicts in deepening the canal. The Northern Penitentiary at Joliet is midway between the terminal points of the canal, and the scheme would not seem to be a bad one.

B. C. BROPHY, of Hannaford, Dak., writes us: "Inclosed find payment for another year's subscription to the AMERICAN ELEVATOR AND GRAIN TRADE. I think too much of the publication to let it drop. I will erect a steam elevator at this point this season. A flouring mill is also to be built here."

JUST what effect the waterways will have on the question of through rates where the railways come into competition with water routes remains to be seen. The railways seem to take it for granted that the commission will allow them to establish rates on such through business without regard to the letter of the law.

IN the article on "Elevators," by Mr. Arthur T. Tinewell, of Winnipeg, which was published in our last issue, the sentence reading, "The advantage of efficient elevators to the dealer have to transact," etc., should have read, "The advantage of efficient elevators to the dealer enables him to transact a larger business," etc.

INTERESTED parties should note the card of Messrs. Goodridge, Field & Co., of Norfolk, Va. This firm has been in business in grain at that point for nearly twenty years. They handle a good deal of seed corn for ensilage. The N. & W. R. R. is competing for the grain trade, and its elevator is now open for business.

THE attitude of the "bears" in this market with regard to the recent advance in wheat was peculiar. They have had things their own way for so long that a rise in wheat is looked upon almost as a crime, and the man who aids the advance by buying the stuff has been looked upon as a manipulator who really ought to be disciplined.

WE have received a call from D. H. Spencer, Jr., who has just returned from Florida, where he has been since December, hoping to find in that genial winter climate relief from severe bronchial troubles. In this his hopes have been to some extent realized, and it is his intention to at once resume his old business of mill building. As a successful milling engineer, Mr. Spencer is well known, especially in the territories of Utah and Idaho, where he has built or remodeled many flouring mills. He is now putting into working shape his DUST-TIGHT SWIVEL GRAIN SPOUT and CASE for which he has received letters patent. This is intended to take the place of the old style of swivel spout or "revolver" now used in

mills and elevators. It can be operated from any floor; is perfectly dust tight; does away with all scattering of grain, and is so arranged that spouting can be quickly and securely attached. Mr. Spencer is at present stopping with his brothered at 336 Park Ave., Chicago.

AN automatic power shovel built in sizes suitable for both large and small establishments, is made by Messrs. G. W. & C. A. Lane, of Exeter, N. H., and advertised in this issue. This firm also manufacture grinding mills and the Little Giant Cob Cracker, whose merits they will be pleased to demonstrate to interested parties.

WE send out a very large number of sample copies of this issue of the AMERICAN ELEVATOR AND GRAIN TRADE. We only ask that the recipients look the paper over, and if they think it is worth the small sum asked for subscription, to send us the amount. We think we can benefit almost any one a dollar's worth in the course of a year.

OUR readers will notice the new advertisement of the Racine Dustless Grain Separator. The manufacturers of this machine, Messrs. Johnson & Field, of Racine, Wis., wish to direct the attention of elevator men and millers to the special points of excellence in this popular separator. They will be pleased to open correspondence with all interested parties.

WE are requested to announce that the Italian government has arranged for an international competition of corn-driers, to be opened at Milan May 1, applications for competition to be forwarded to the Executive Commission before March 31. B. Grimaldi, Minister of Agriculture, invites competition from all nations. Diplomas and \$400 in premiums will be awarded to the successful competitors for machines for drying corn and rice.

IN the Minnesota legislature all of the radical measures proposed by Mr. Donnelly and other reformers, for controlling the railroads, were finally defeated, including the measure making a horizontal reduction of 20 per cent. on all railroad charges. In place of them a measure was adopted embracing the chief features of the Inter-State Commerce Bill. The lesson is being rapidly learned that while railroads are sadly in need of regulation and supervision, laws framed for that purpose must not be narrow-gauged. The railroad question is a problem for statesmen; demagogues should not be allowed a finger in the work of compelling the roads to do justice, for their malevolence carries them too far.

A GOOD many men have kept their money by not putting faith in pointers; and conversely other men have parted with their bundles by pinning their faith to some supposed tip on grain or stocks. They are telling this story about a well-known Chicago character: A prominent grain broker stepped into the office of Chapin & Gore, the rich whisky men, quietly sidled up to Jim Gore, and whispered to him a "point" on the bull side of wheat. Gore received the point without any excitement. He drew the broker gently toward the window, and then pointed out to him a handsomely framed article of vertu that hung on the wall near the window. In the elaborate frame was encased an ordinary piece of writing paper. On it, in red ink, in such business-like shape that even a tyro could understand them, was an account of losses on points on stocks, grain, and pork. The aggregate was emphasized by big, heavy figures, and reached \$35,653.72. The items were given and the dates of the trades and the losses made. "That," said Gore, "is the respectable sum which 'pointers' have cost me. I had the account made out and framed and hung up about three years ago, when I quit. When anybody brings me in now an especially valuable pointer on the markets I take 'em gently to that frame and show 'em how much pointers equally as emphatic have cost me. I don't touch anything now."

Fires, Casualties, Etc.

A. S. McKay's elevator at Friend, Neb., was totally burned Feb. 27.

Saltzman & Son's brewery, at Oil City, Pa., was burned March 15. Loss \$20,000.

The elevator of Case, Bishop & Co., of Mankato, Kan., was badly damaged by fire not long since.

The breaking of a chain in the elevator of G. C. Miller, at Clifton, Kan., severely injured the engineer.

Wm. Länze's brewery, at Sauk City, Wis., was burned recently. Loss \$10,000, without any insurance.

Henry Jackson, a grain dealer of Circleville, Ohio, has been burned out. Loss \$5,000; partially insured.

The Red River Valley Elevator, at Church's Ferry, Dak., containing 16,000 bushels of wheat, was burned Feb. 21.

We regret to announce the decease of J. A. Closser, of the grain and elevator firm of J. A. Closser & Co., Indianapolis, Ind.

An elevator and the "Eclipse Flour Mills," of Potts, Proctor & Co., of Danville, Ky., was burned March 9, with a loss of \$60,000.

William Hewson, while shoveling grain at Hamilton's elevator, Toronto, Canada, fell into the bin and was smothered to death March 1.

The warehouse of the Standard Milling Co., at Alton, Ill., was burned a few days since. The loss, which was heavy, was partially covered by insurance.

The broom-corn warehouse and stock barn of Taylor Brothers, ten miles northwest of Mattoon, Ill., burned Feb. 20. Loss \$4,000; covered by insurance.

Samuel Hurley, engineer in G. C. Miller's elevator at Clifton, Kan., was hit with a piece of broken chain and severely hurt, causing a two weeks' lay-off from duty.

An unused elevator, owned by Charley Scouten, of Waterville, Kan., narrowly escaped burning, but the use of hand grenades and a barrel of salt water succeeded in putting out the flames. The fire is supposed to have been the work of an incendiary.

On the night of Feb. 18, E. & A. Zoller's malt house, at West Davenport, Iowa, with 3,000 bushels of barley and malt, was destroyed by fire. The fire originated from the heating apparatus. Loss \$7,000; insured for \$5,000 in the Williamsburg City and \$1,000 each in several others.

The elevator, warehouse and entire flour milling plant of C. Burkhardt, Hudson, Wis., was burned March 6; loss \$100,000. The elevator contained 35,000 bushels of wheat; it and the warehouse were valued at \$40,000, with an insurance of \$22,000; the mill at \$40,000; insured for \$17,000.

Early on the morning of March 11 the grain and commission warehouse of Jones Bros., Winchester, Ky., was burned with its contents of 130,000 pounds of hemp, 8,000 bushels of wheat, 35,000 bushels of blue grass seed, and twenty barrels of whisky. Total loss \$50,000, with an insurance of \$35,000.

Reports were received in Buffalo, Feb. 26, that the steamer Cumberland, owned by Gilchrist and others, of Cleveland, with a cargo of about 70,000 bushels of wheat, destined for Buffalo, had sunk at Moffatt's dock at Detroit in 20 feet of water. The wheat was worth 81 cents a bushel and was fully insured.

During the recent floods the boiler room of French's brewery, at Ft. Wayne, Ind., was flooded so that it fell on Feb. 16, causing a damage of \$10,000. The beer-vaults and ice houses are liable to the same fate. The proprietors have decided to erect a new brewery, costing \$100,000, near the old site, but at a safe distance from the river.

Early on the morning of Feb. 13 the elevator of E. Augush, situated near the B. & M. track, Arapahoe, Neb., caught fire, and, before any aid could be obtained, the town not having any fire facilities, was entirely destroyed. The mill had about 100 bushels of oats and nearly 400 bushels of wheat in its bins, which, with the building and machinery, are a total loss. The building and machinery were valued at \$2,000; insured for about \$2,700.

The oats racket is being worked in Canada. The Toronto *Globe* says: Parties are traveling through the eastern portion of the Province selling foreign oats at \$10 per bushel, in lots of not less than ten bushels, on the representation that \$7.50 per bushel will be paid for oats grown from this seed. It is reported that one farmer has purchased fifty bushels and given his note for \$500. It seems the supply of fools cannot be exhausted.

The Greenleaf, Kan., *Herald* says: The Farmers' Alliance at Clifton are making preparations to build a \$10,000 elevator, with which to handle their grain. The Alliance at Palmer have sent for new scales, and will commence shipping their own grain as soon as practical. We only have one thing to regret for this move, and that is that C. D. Potter, a man who is universally believed to be honest and just, will be the heaviest loser, by reason of his owning a large elevator there which will necessarily stand idle if the farmers refuse to sell to others outside of their Alliance. Grain dealers who have nothing but corn cribs and scales ought to feel thankful.

THE NEBRASKA GRAIN MEN.

The Lincoln correspondent of the Omaha *Daily Bee* has discovered that the Nebraska grain dealers are a set of very bad men, and wades through a column to prove that Senator Keckley's bill should become law right away. He says: The strongest argument in support of the high qualities of Senator Keckley's bill (S. F. 32), to prohibit pooling by grain dealers for the purpose of controlling the price of grain is the desperate and determined opposition manifesting itself against the measure. Every senator who has not openly declared himself as strongly in favor of the bill is being dogged and coaxed and threatened into a promise to vote against it. They are told by these paid lobbyists that the very organization of the Nebraska Grain Dealers' Association is a menace to the railroads; that it was organized to forestall, as far as possible, the attempts of the railroads of the state to discriminate against the small dealers in grain as against the larger dealers. They claim that the railroads have no interests in common with those of the association, and, if Keckley's bill passes, it will throw these small dealers on to the mercy of the heartless railways, which action they claim would prove disastrous to the grain trade throughout the state. They have nothing to say about the fact that the elevators on the line of the Union Pacific Railroad are built upon the right of way of that line, and practically under the supervision of its officers. The Union Pacific and B. & M. Railways foster the Nebraska Grain Dealers' Association in every way, giving reduced rates of transportation and passes to all members and employees of it, and reduced rates upon the materials and machinery used in the building and operation of their elevators. In fact, their interests are so closely allied that the assumption that the smaller dealers would, in any event, suffer at the hands of the railroads, is worse than ridiculous. These guileless lobbyists also state that the grain association does not make large profits by means of their pool, which they are ready to prove by an exhibition of their books before the railroad committee, by which they expect to prove the association to be entirely blameless of any attempt to throttle honest competition in the grain trade. But the committee told them they had no use for such evidence, as the bill had already been recommended to pass.

The lobbyists claim that the price of grain is not daily telegraphed from Omaha and such quotations are made to fix the price at the will of the governing committee. This they know is false. Ever since the introduction of this bill in the senate your reporter has been fishing for a copy of the by-laws of the Nebraska Grain Dealers Association, which he knew to be held by the members in bonds of strictest secrecy. His efforts were partially rewarded to-day, however, when he was permitted to see for a few moments the constitution and by-laws of the association. He also managed to copy a few of the important features of them, which are given below for the edification of the legislators and information of the public. The following is taken from the constitution:

"This association shall be known as the Nebraska Grain Dealers' Association, the headquarters of which shall be located in Omaha.

"There shall be a committee of seven, consisting of the president, secretary and five other members, to be elected by the association, which shall have power to call meetings of the association, govern prices, arbitrate all disputes and have charge of all business affairs of the association in intervals between meetings, to be called the 'governing committee.'

"Each member of this association shall be governed in all matters pertaining to the association by the governing committee, and failure to obey the orders of the governing committee shall subject him to a fine, suspension, or expulsion, as the governing committee may decide.

"Each member of this association shall deposit with the treasurer his or their note for \$500 as a guarantee for his or their faithful compliance with the constitution, by-laws and rules of the association."

[If any doubt exists as to the authority of the association arbitrarily fixing the price of grain, the following by-law will expel it:]

"The maximum price which any member of this association shall pay for grain shall be established by the governing committee, and shall not be exceeded except by consent of the governing committee.

"The governing committee shall notify members by wire of any change in price to be paid, and all members shall be notified at the same time.

"The governing committee shall use a cipher in notifying members of a change in price.

"Any member divulging any proceedings of or advantages received by this association to any person not a member of the same, shall be subject to expulsion by the governing committee or association.

"We as members of the association pledge ourselves not to contract or buy, or buy at country stations any grain, whatsoever, under any circumstances to be delivered at any future day, except from members of this association.

"We as members of this association pledge ourselves not to sell any grain to foreign buyers who shall buy grain on track of any person not a member of this association.

"We, the members of this association, recommend concert of action among its members at all local points in regard to a division of grain and pooling profits as far as practicable.

"In case the grain dealers on any line of road herein represented should fail to co-operate with this association on account of the action of the road in which they are located, or for any other cause, such failure to co-operate shall be deemed sufficient cause to declare the association

at an end, and all members shall be free to act as though they had not been members of said association; and we pledge ourselves that any action of this association, or even the fact of its existence shall ever be maintained as a secret belonging to each and every member, never to be divulged.

"We the undersigned grain dealers of this association do hereby pledge ourselves, each and every person or persons and the firms which we constitute or belong to, not to divulge to our agents or other persons outside of this association any information whatsoever."

THE EXCHANGES.

Memberships on the Chicago Board of Trade are selling at \$2,000 and less.

A Chamber of Commerce is to be erected by the Des Moines, Iowa, Board of Trade.

Tickets of membership on the New York Produce Exchange are selling at about \$2,300.

The Open Board of Trade in this city will not consolidate with the Stock Exchange, as was reported.

The Milwaukee Chamber of Commerce has asked the Wisconsin Legislature to suppress the bucket shops.

President A. M. Wright, of the Chicago Board of Trade, is again able to be about, after a long and serious illness.

The New York Produce Exchange has decided that a car of oats shall contain 1,000 instead of 950 bushels, as heretofore.

The hall of the New York Produce Exchange is 215 feet long by 135 feet wide. The building itself covers an acre and a half of ground. The rooms not devoted to the business of the Exchange bring an annual rental of \$250,000.

The Buffalo Merchants' Exchange has published a statement showing the shortage and surplus on the grain received at that port last season. It shows a shortage of 28 pounds per 1,000 bushels on grain received from this city; Toledo, 16 pounds; Detroit, 9 pounds; Milwaukee 26, and Chicago an overplus of two pounds per thousand bushels.

The Merchants' Exchange of St. Louis, besides trying to stamp out bucket-shop trading, is now making a move against trading in grain privileges. A petition was circulated on 'Change lately asking the exchange directory to submit to the vote of the members a rule which will prohibit, under severe penalties, the dealing by members in privilege trading, either before, after, or during 'Change hours.

The New York Produce Exchange managers, while a large number of the members consider dealing in puts and calls no more illegitimate or objectionable than margin transactions in futures, have adopted the following new rule, going into effect after being posted ten days: "Any member who shall buy or sell privileges known as 'puts' and 'calls,' or who shall under the rules governing the various trades of the Exchange, deliver, receive or margin any contracts based upon such privileges, shall be deemed guilty of misconduct and liable to discipline under section 32 of the by-laws."

Half of the cellar of the New York Produce Exchange is being converted into a swimming and bathing resort, and after May 1 members will only have to go down stairs to take a plunge. Workmen are now making the necessary excavations. The main feature of the proposed establishment will be a pool sixty-two feet long and nineteen feet wide, which is to be kept filled with salt water of proper temperature to a depth of five feet. Here the swimming will be done. The bottom and faces of the pool are to be brilliant hued pictures of fishes that will seem to be alive when the water is in motion. Besides the pool there are to be one hundred dressing-rooms, seven bath-rooms, a shower-room in which the rain will be imitated; two hot rooms, a steam room, electric room, shampoo room, barber shop and parlor. The floors and wainscoting will be of marble.

Says the Chicago *Mail*: The attitude of the board toward the "put and call" regulation looks like the beginning of a better regime. It will, if the men in the directory who have courage, and are not there to swell the volume of their commissions, show no white feather toward the powerful violators of the rule. If, after the "put and call" matter is disposed of, the directors will then address themselves to the framing, the passage, and the enforcement of a commission rule, another long step will be taken in the right direction. That would make memberships more valuable. There are several other provisions that are enforced by the stock exchange that would help here. Men ought not to be sold memberships unless they can pay for them themselves. At New York there is an express rule forbidding a lien on a membership in the stock exchange. The result of this is that orders are of necessity distributed by the large firms among the brokers. They cannot send a corps of boys from their own offices into the different pits. Then the plan, suggested by Robert Lindblom, of retiring a few memberships ought to be adopted. The fifteen delinquent certificates now on the market have depreciated the 2,000 that are in existence \$500 each. What folly! Besides all this, a plan of insurance would be very attractive.

WATERWAYS

There are 4,000 miles of canals in England.

On the opening of navigation 1,000,000 bushels of wheat will at once go from Detroit to Buffalo.

A resolution has passed the Toronto, Canada, Board of Trade urging the Dominion Government to enlarge the canals between Lake Ontario and the sea, and to continue the reduction of tolls on export grain passing through Canada.

The Duluth, Minn., Chamber of Commerce took action Feb. 21 in regard to the calling on associations in all cities interested in the Lake Superior trade to meet in convention at Sault Ste. Marie, Mich., in interest of the St. Mary Canal.

Systematic piracy on the people's waterways must promptly be stopped. We should either run the canals on business principles, or abandon them. It is a huge mockery to publish to the world that the New York State canals are free. True, the people have stopped collecting tolls; but there are several organizations making double collections on canal commerce at both ends of the Erie Canal.—*Canal Advocate*.

The following items regarding the progress of work on the Panama Canal are of interest: Twenty thousand men are on the isthmus; 415 miles of special railroad have been built; 14,000 cars, 29 steamers, 200 vessels, 304 small iron works, 48 drags, 96 herculean excavators, 36 powerful perforators, and 468 immense pumping engines are at work. Light for night work is supplied by 7,000 lamps, and 175 engines are constantly engaged.—*Boston Transcript*.

Mr. Tillinghast, of New York City, says that the first improvement in waterways occurred prior to the Revolution. The Dutchmen up around Albany used to run a little boat up the Mohawk River as far as Little Falls, where it was stopped by the cataract, and so in order to develop the country around about Utica and Rome, they built a system of locks around the Falls, and thus were enabled to take their little boat to Utica. The remains of those locks are still to be seen. The next step was the Erie Canal.

The York, Pa., dispatch of March 14 says: No work is yet being done on the Tide Water Canal. It will require about thirty days to put the canal in order. The Reading Company, it is said, wants to throw up its lease, and there is talk of the State of Maryland foreclosing the mortgage it holds on the canal property and selling the same. It is probable the work of repairing the damages to the canal is delayed until these questions are decided. At least, no orders have yet been received to commence the repair of the damages done by the late flood.

During the seven months of navigation the Erie Canal delivered to New York City 12,000,000 more bushels of grain than were carried by railroad, and nearly 11,000,000 bushels more than were received from all other methods of carrying. Had it not been for the Erie Canal the grain business of New York would have fallen behind by many millions of bushels. Philadelphia and Baltimore are making strenuous efforts to divert railroad traffic from New York, and only the advantage which the Erie Canal gives it enables the latter city to maintain the predominance in commerce which it has gained.

Peoria Transcript: Mention has previously been made of the formation of a company to increase the facilities of water transportation from our city. The following well-known grain dealers have the matter in hand: E. S. Easton, W. H. Barrett, B. Warren, Jr., Warren Buckley and Joseph Elder. Application has been made to the Secretary of State for authority to open subscription books and as soon as this is received the stock will be promptly taken. The name of the company is the Peoria Steamboat and Barge Line. The capital stock is \$25,000, divided into 250 shares of \$100 each. From the character of the gentlemen interested in the enterprise it is evident that it will be pushed with vigor and will no doubt be the means of preventing any damage to the business of Peoria by reason of the Inter-State Commerce Law. It is also probable that another lumber company will be organized among our wholesale merchants and lumber dealers. The Illinois River is coming to the front as an important factor in the transportation problem and promises to be the instrumentality by which Peoria's supremacy as a distributing center is to be maintained.

The second annual meeting of the Lake Carriers' Association was held at Buffalo on March 9. The out-of-town members present were Thomas Wilson, Cleveland; A. Colton, Toledo; Eber Ward, James Millen, J. T. Whiting, C. C. Blodgett, Capt. Moran, Detroit; F. J. Firth, J. E. Payne, of Anchor Line, Philadelphia. President S. D. Caldwell read an address reviewing the work of the last year, which was followed by a discussion of the topics treated therein. The members all indorsed the Board of Arbitration for salvage claims, and several suggested that it would be well to have collision and other damage cases also settled by this board. There are thirty signatures of members willing to adopt this arbitration plan. Capt. Millen mentioned a new shoal in the Detroit River, opposite First street, where the Cumberland recently grounded on a fourteen foot draft. The election resulted as follows: President, S. D. Caldwell; Vice-Presidents, James Ash, Buffalo; F. J. Firth, Erie; James Millen, Detroit;

Ira H. Owen, Chicago; Secretary, F. Almy; Treasurer, J. C. Evans; Managers, Thomas Martin, Oswego; James Ash, W. Bullard, S. D. Caldwell, E. D. Evans, W. P. Henry, David Donaldson, Buffalo; F. J. Firth, Erie; M. Bradley, H. M. Hana, Thomas Wilson, Cleveland; A. W. Colton, Toledo; James Millen, Eber Ward, Detroit; James Davidson, Bay City; Joseph Austrian, W. M. Egan, J. H. Owen, Chicago; R. P. Fitzgerald, David Vance, Milwaukee; Alex. McDougal, Duluth.

The Racine, Wis., *Journal*, says: Few of our citizens will remember that the Racine and State of Burlington Canal Company was formed some years ago to build a canal from Racine to Burlington. Hard times coming on and low railroad rates, the company concluded to let the enterprise rest until better times should come to our city. The Inter-State Commerce Law being a matter of fact and the increase of freight rates more than probable and good times close at hand and prosperity with us, the Canal Company, at an early date, will begin operations. Profiles of the route of the great enterprise can be seen at the office of the president, Mr. Thos. Dickinson, or the superintendent, Mr. G. A. Rickeman.

Almost twenty million dollars have been expended on the Welland Canal—pretty nearly a million a mile—but Canada does not seem to mind the expense a bit. A Buffalo contemporary points out that even when completed, as now planned, with a depth of about fourteen feet, the canal will not have draught enough to accommodate some of the craft which seek to use it; for it has been the custom of grain laden vessels, on reaching Port Colbourne, to lighten a part of their cargo, until they were light enough to lock through without difficulty. In the last report of the Canadian commissioner of inland marine to the minister of inland revenue, it is shown that the aggregate revenue of the Welland Canal was \$8,225.53 less in 1885 than in 1884. The official report giving the results of 1886 has not yet been made, but it is stated that the business of 1886 was better than for 1885. The figures show that while there has been a steady increase in the quantity of grain passed through the Welland Canal, bound for United States ports during the six years ending with 1885, the quantity passed through the Welland, bound to Montreal, was less in 1885 than during any previous year of the six. The obvious conclusion is that the toll involved a loss of revenue without any material increase of traffic.—*Marine Record*.

A joint deputation from the Boards of Trade of Toronto, Montreal, Hamilton and Kingston waited upon the government at Ottawa, March 8, to urge that the Welland and St. Lawrence canals be made free, and that steps be at once taken to deepen the canals to a depth of fourteen feet. The deputation pointed out the advantages that would accrue from the removal of canal tolls and the deepening of all canals to a uniform depth. The Ministers said that with respect to the question of making canals free, they would consider the representations of the delegates and make known their decision at an early day. They also stated that it was the policy of the present government, as well as of Mr. MacKenzie's government, to proceed with the work of deepening the canals of the St. Lawrence and Welland system to a uniform depth of fourteen feet, and that the work would be carried on as fast as possible. The delegation from Kingston also interviewed the government to ask for a grant of money to improve Kingston harbor and to erect an examining warehouse there. Considering that Sir John MacDonald is now member for Kingston, and that he is likely to be unseated, thus necessitating a new election, the Kingston people should have no difficulty in getting anything they may demand from the government.

PERFECT CORN.

There have been serious complaints of late years of want of perfection in the earing of corn. Too many of the largest and apparently best stalks have no ears—are barren. There are various reasons for this. The main one is constant and continued cropping with the same seed. There is no effort in the selection of seed, to obtain yearly the seed from the most prolific stalks. Nor is there sufficient efforts to infuse new blood, by obtaining seed from a distance, grown on a different quality of soil. In this respect, it is not so necessary to have another variety of corn as it is to have seed raised on a radically different kind of soil. In doing this care must be taken that the seed is not carried too far North or South. We are satisfied the seed brought to Iowa from Missouri and Kansas two years ago has been a serious injury to our corn crops, and it is very probable the wide complaints which have been made to us lately of the great number of barren stalks were caused by the seed corn which came from the South. There were unscrupulous seedsmen who pretended to get their seed corn on the same parallel of latitude in Nebraska, who in fact obtained it in Southern Missouri. We have had positive assurance that this was the case in some instances.

The reason that they do not raise as good crops of corn in Louisiana and Texas as they do in Illinois and Iowa is not for want of rich soil, or seasonable rains, but from some cause many of the large stalks—which are twice as large and tall as they are in Iowa—have no corn on them. And this tendency increases as it progresses south from the Iowa line. Hence we fear that the seed which was brought to Iowa two years ago, brought with it this taint of character of barrenness. Corn is our greatest staple, and yet not one-tenth of the effort is made to improve the corn plant that should be done. Greater care in selection, and more efforts in changing location of seed, from sandy to clay soil, and vice versa. In this way infuse new blood, and with it new vitality and fertility.—*Ee*.

AMERICAN GRAIN SHIPMENTS.

The following statement, compiled from the official reports published monthly, shows the quantity of wheat and flour exported from Portland and San Francisco, on the Pacific Coast, and from all the principal ports on the Atlantic Coast from July 1, 1886, to Jan. 31, 1887:

	Wheat.		Flour.	
	Pacific ports.	Atlantic ports.	Pacific ports.	Atlantic ports.
July.....	1,450,558	5,068,177	146,845	830,128
August.....	1,525,969	10,841,794	93,616	882,198
September.....	3,606,000	6,959,936	106,780	714,162
October.....	2,746,073	4,195,297	157,066	759,174
November.....	4,033,470	4,167,559	140,093	777,521
December.....	2,728,713	5,253,018	145,772	977,586
January.....	2,520,797	5,535,874	101,352	971,325

Totals..... 18,511,580 42,021,665 891,524 5,732,094

The shipments from the above ports aggregate as equivalent of 90,339,526 bushels wheat, including flour as wheat, 67,816,088 bushels went from Atlantic and 22,523,438 bushels from the two Pacific ports. The above statement plainly shows that the foreign commerce of the country has made rapid strides in the right direction during the past few months, and there is little doubt that the foreign demand for breadstuffs and cotton will be large for some time to come, so that nothing is to be feared so far as trade balances are concerned.

The following shows the total breadstuffs exported since 1880:

Year.	Bushels.	Value.
1880.....	293,119,124	\$275,936,859
1881.....	227,243,843	224,118,560
1882.....	160,049,323	182,678,865
1883.....	175,317,209	172,692,180
1884.....	164,767,480	107,813,403
1885.....	168,209,867	129,757,260
1886.....	190,558,113	148,122,020

—N. Y. Produce Exchange Reporter.

THE GRAIN TRADE PROSPECTS.

The season has now so far opened that already lake carriers are enthusiastic over the business prospects of 1887. One thing is already made certain from the returns which have been received from the primary reports on the Northwest lake system; that is, that there will be an abundance of grain traffic. So far as appearances go, there will be a heavier grain traffic this year than there will be tonnage to accommodate it. The result of this will be that the traffic will find other outlets than the Erie Canal. The Welland Canal management are once more in the field with a strong bid for the Northwestern grain trade. By a reduction of rates they hope to attract the trade to the St. Lawrence route, and thence to the foreign markets of the world. This at first sight would appear to be a misfortune for the lakes, but it is not so as a matter of fact. What the great Northwest granary wants is a fair field and no favor. The cheaper it can put its produce on the market the greater will be the field at its command; the greater the chance of cutting out the food products of the East Indies and the Black Sea provinces, which are periodically quoted as being the grain-producing rivals of the United States. It does not matter by what route our grain reaches the Atlantic seaboard so long as that route is the cheapest and most advantageous. If merchants select the Welland Canal, they will do so because they find it to their interest to do so. If they choose the Mississippi Valley route for getting their produce to the ocean it will be for the same reason. As surely as a stream will filter through the most convenient strata, so will trade discover for itself the easiest and best outlet. The trade of the Northwest provinces will not pause to ask whether the Welland Canal is a less patriotic route than one through the United States. It will simply consult what is the most convenient for itself, and go ahead accordingly.

There seems good reason to believe that New Orleans will reap a great deal of advantage from this year's abundant grain produce. It is probable that this year the great grain market of the world will be the United States. The severity of the winter in England has greatly injured the harvest prospects, and from Odessa the news comes that a heavy, black, blighting frost has covered the south of Russia where the fields have been bare of snow all winter, so that the prospect of a large out-turn of grain from the Black Sea ports is rendered very improbable. The news from India, with regard to the cereal prospects, is at best speculative, but in any case that country can not compete with the United States if we are untrammelled by high rates or difficulties in finding a convenient seaport. India is handicapped by the charges of the Suez Canal and about 4,000 miles, and the United States ought to be able to beat her in any grain market in Europe. We want all the outlets for our grain traffic we can get. Let the gateway be the Mississippi, the Welland Canal, or the Erie Canal, it does not matter. The more the merrier, and the better for the development of the natural trade of the Northwest. The more outlets the greater will be the competition; the greater the competition the cheaper rates will be; and the cheaper rates, the more the Northwestern granary will be able to compete with its foreign adversaries.—*Marine Record*.

Maurice Pincoffs, Secretary of the Gebain Company, a well-known firm of French shippers of grain and provisions, it is stated, has contracted an indebtedness on the Board of Trade of about \$40,000. Pincoffs is a young Frenchman, who looked out for the speculative business of his firm on the floor. Gebain & Co. stand very high, and are not at all involved by the irregularity.



Legality of Combinations to Regulate Competition.

An interesting question was involved in the case of the Central Shade Roller Co. vs. Cushman, decided recently by the Supreme Court of Massachusetts, and reported in the *Railway and Corporation Law Journal*. The point raised was whether a number of manufacturers, under several patents of certain curtain fixtures, known as "wood balance shade rollers," could form a corporation, of which they were the stockholders, for the purpose of preventing, or rather regulating, competition between the parties in the sale of the particular commodity which they made. The contract between the parties put no restraint upon the production of the commodity in question, and offered no inducement to any person to produce less than to the full extent of his capacity. It did not restrict the sale of the commodity, but provided that sales not at retail or for export should be in the name of the corporation and reported to it, and that when any party should establish an agency in any city or town for the sale of a roller, made exclusively for that purpose, no other party should take orders for the same roller in the same place. It was further provided that the price for rollers of the same grade, made by different parties, should be the same, and should be according to a schedule contained in the contract, subject to changes which should be made by the company upon recommendation made by three-fourths of its stockholders. The court said that the contract was, in effect, an agreement between three makers of a commodity that for three years they would sell it at a uniform price fixed at the outset and to be changed only by consent of a majority of them. It, however, held that the purpose was a lawful one, and that the means adopted for carrying it out were legal. The court said: "The agreement does not refer to an article of prime necessity nor to a staple of commerce, nor to merchandise to be bought and sold in the market, but to a particular curtain fixture of the parties' own manufacture. It does not look to affecting competition from outside—the parties have a monopoly by their patent, but only to restrict competition in prices between themselves. Even if such an agreement tends to raise the price of the commodity, it is one which the parties have a right to make. To hold otherwise would be to impair the right of persons to make contracts and to put a price on the products of their own industry. But we cannot assume that the purpose and effect of the combination is to unduly raise the price of the commodity. A natural purpose and a natural effect is to maintain a fair and uniform price, and to prevent the injurious effects, both to producers and consumers, of fluctuating prices caused by undue competition. When it appears that the combination is used to the public detriment, a different question will be presented from that now before us. The contract is, apparently, beneficial to the parties to the combination, and not necessarily injurious to the public, and we know of no authority or reason for holding it to be invalid as in restraint of trade or against public policy."

Minnesota Grain and Warehouse Law Held Unconstitutional.

The Supreme Court of Minnesota has just declared unconstitutional the grain and warehouse law (Chap. 188 of the General Laws of 1885). This decision was rendered in the case of *The State of Minnesota vs. The Chicago, Milwaukee & St. Paul Railway Company*. The case was originally instituted by one Berry to recover the fine which the law provided should be collectable from any railway company in case of its non-compliance with the statute. The company refused to allow the erection by Berry of a warehouse on its lands, and he sued to recover the penalty provided for such refusal. The court, in deciding against the validity of the law, said: The lands acquired by a railway company for the purposes of its enterprise are, so far as the right of property is concerned, private property. If purchased, the company pays for them; if taken in the exercise of the right of eminent domain, it pays the compensation to the owner. They are purchased or taken and held for a public purpose, a public use. Otherwise they could not be taken under the right of eminent domain. They are charged with a public duty, which the company, in consideration of the rights and powers conferred on it by the state, assumes to perform, and which the state can compel it to perform. But such public use is specific, not general, and when required for any other public use the land must be taken for the purpose in the same manner as the lands of any private owner are taken, *i. e.*, through the right of eminent domain. The ownership being private, there being a private interest in them, they cannot in any manner or on any pretext be taken for a private use without the consent of the owner. Nor can they be taken for public use without making "just compensation." * * * It is, however, contended that the section aims merely at regulating the public use for which the land was originally taken. By that taking the company acquired and paid for the exclusive right to possess and employ the land in that public use. Such right cannot be taken from it, except through exercise of the right of eminent domain or through forfeiture. The section does not assume to control or direct the com-

pany in its use of the land, but to exclude it from such use, and to confer the right to employ it in a similar use upon another. It must be apparent that the amount of land to be taken does not affect the principle. If the state can take any of the lands, it can take all; if it can put another person or corporation into possession of so much of the company's land as is necessary to construct and maintain an elevator or warehouse, it can put another corporation into possession of so much of its lands as may be necessary to construct and maintain another railroad. Indeed, if it can, under the pretext of regulating the use, oust the company from any part of its property, however unimportant, no reason can be given why it may not, as a regulation, oust it from its right of every yard, depot ground, tracks and stations, and put other parties in possession of them, for it holds and employs all these for public use. So far as the section requires railway companies to let other persons into possession of any portion of their land without the compensation required by the constitution, it is invalid.

Some Points of Business Law.

It is a fraud to conceal a fraud.
Ignorance of the law excuses no one.
Notes bear interest only when so stated.
A receipt for money is not always conclusive.
The law compels no one to do impossibilities.
Signatures made with a pencil are good in law.
Principals are responsible for the acts of their agents.
No consideration is sufficient in law if it be illegal in nature.
The payee should be distinctly named in the note, unless it is payable to bearer.
A bill may be written on any paper or substitute for it, either with ink or pencil.
A note obtained by fraud or from a person in a state of intoxication cannot be collected.
Notice of protest may be sent either to the place of business or of residence of the party notified.
An indorsee has a right of action against all whose names were on the bill when he received it.
The time of payment of a note must not depend upon a contingency. The promise must be absolute.
A note made by a minor is void; a contract made with a minor is void; a contract made with a lunatic is void.
If a drawer of a check or draft has changed his residence the holder must use all reasonable diligence to find him.
An agreement without consideration is void; a note made on Sunday is void; contracts made on Sunday cannot be enforced.
Each individual in a partnership is responsible for the whole amount of debts of the firm, except in cases of special partnership.
A note indorsed in blank—the name of the endorser only written—is transferable by delivery, the same as if made payable to bearer.
If the letter containing the protest of non-payment be put in the postoffice, any miscarriage does not affect the party giving notice.
If a note is lost or stolen it does not release the maker. He must pay it if the consideration for which it was given and the account can be proven.
"Value received" is usually, and should be, written in a note, but is not essential. If not written it is presumed by the law, or may be supplied by proof.
An oral agreement must be proved by evidence. A written agreement proves itself. The law prefers written to oral evidence, because of its precision.
Checks and drafts should be presented during business hours, but in this country—except in cases of banks—the time extends through the day and evening.
If one holding a check as payee or otherwise transfer it to another, he has a right to insist that the check be presented that day or, at the farthest, the day following.
No evidence may be introduced to contradict or vary a written contract, but such evidence may be received in order to explain the contract when it is in need of explanation.
The maker of an accommodation bill or note—that is, one for which he has received no consideration, having lent his name or credit for the accommodation of the holder—is fully bound to all other parties as if they were a good consideration.

THE CROP OUTLOOK.

The *Farmer's Review*, of this city, says: "Thus far the reports from the winter-wheat belt indicate that the crop is emerging from the winter in better shape than last year. The crop is not assured from the resulting damage of storms and bad weather, and still has to pass through a critical period, but as a whole the outlook must be regarded as more favorable than at the beginning of March of last year. The extremely mild weather of the opening days of last week, followed by the cold weather, caused some injury in Illinois and Indiana, and in La Porte and Randolph counties of Indiana considerable wheat was frozen and killed. Twenty-three counties report the wheat as looking well, while in Brown, Johnson and White counties injury is reported. Thirteen counties in Indiana make very favorable returns. In Michigan and Wisconsin the outlook is reported as very favorable. Nearly all the Wisconsin fields had an ample snow covering since last November. The weather has been unfavorable in Ohio, and some injury is reported in Champaign, Seneca and Van Wert counties, but all the other counties reporting made favorable returns. The season is well advanced in Missouri, and spring plowing has commenced.

THE BUCKET SHOP.

It is a fact not altogether creditable to our civilization that persons considered respectable are frequenters of bucket shops, and are at no pains to conceal their habit of gambling there. They even make their boasts of "beating the bucket shops" as other gamblers do of beating a faro bank. And the evil has increased enormously in the last few months. These concerns, obstructed by no adequate law, have pushed their operations all over the country in a most persistent and systematic way, till they have become a great power, and have gathered into their toils a large number of people once too careful of their own reputation to venture into such places. Many of these people are those who have been unsuccessful in speculation elsewhere, and have turned to the bucket shop as a last resort. We have had some pretty hard times in the last five years for what are known as outside speculators, and the ranks of those who indulge the desperate desire to recover their fortunes by betting their fives, tens, and hundreds on the next turn in the market have been largely recruited. That they have still disappointment in store for them goes without saying. The profits of the bucket shops come mainly not from the commission account but from the bad judgment and luck of the crowd and their inability to protect their deals by adequate margins.

To the moralist it is sufficient to know that these places are merely gambling houses. To the operator it ought to be sufficient to know that the dice are loaded against him. When a man buys stocks or grain through a broker that broker is bound by every interest of his own and by every law bearing on the subject to protect that man. He is bound to buy at the lowest possible price, to give information and advice as to everything affecting the value of the property, and to sell on the most advantageous terms. The interests of broker and client are identical. In the bucket shop the situation is just the reverse. The customer's loss is the proprietor's gain, and he will leave nothing undone to rob him of his money. The chances have been calculated almost as accurately as those of the various games played in gambling houses. There is plenty of risk in speculation under the most favorable circumstances, and if to the dangers of the market one adds the danger of being swindled in the office where he operates his chances are slim. The relations of a bucket shop and its customers are beautifully illustrated from time to time when a large number of people are on the bull side of the deal, and the bucket shop men go into the market and break the price in order to "freeze out" the people who have been paying them commissions.

The public ought to have a lively interest in this matter, not merely because gambling is a demoralizing occupation, but because operations in these shops have a baleful influence on the markets. Trade is now conducted largely on the basis of statistics. People buy and sell in accordance with the reports of supply and demand, and the statistics are available to anybody who will study them. They can make up their minds as to what the course of the market will be if the reports present the condition of affairs correctly. Everybody knows how hard it has been to do this in respect to our wheat market in the last three years. All the old rules seem to have been set at naught. There has been some occult influence at work, and the trade are just coming to a sense of what that influence is. It is the bucket shops. Nobody can tell the situation of affairs in the bucket shops, for they are private institutions. There may be at any time a great number of people heavily loaded and just ready to "lie down," making it dangerous for anybody else to buy at current prices. If such a condition of things exists on a public exchange, it is known to the careful observer, and he can act accordingly. The man who operates in a bucket shop may have a heavy stake in the market but he cannot protect it. On a public exchange the purchase of a million bushels of wheat produces a certain effect on the price, strengthening the market. In a bucket shop, if it produces any effect at all, it is against the buyer, for it furnishes an additional motive to the proprietor to depress the price and thus get hold of his customer's money. The influence of these concerns in the aggregate in demoralizing the market and discouraging buyers has been enormous, and it is high time that public sentiment was roused to a sense of the mischief they are doing.

Brokers, dealers, and business men generally are just now giving the subject more thought than heretofore, and in some of the states laws have been passed. The Riddle bill in this state is commended by persons who have given the matter careful study, and that or some equally strong measure ought to be enacted. The recent utterances at a meeting of the Commercial Club of this city voice the sentiment of good business men. People who inveigh against speculative operations on the Board of Trade should remember that whatever evil may be found there is a small matter compared with the demoralization caused by the bucket shops, and it is an evil incidental to a legitimate business, while the operations of the bucket shop are in themselves an unmixed evil and can present to the world no decent apology for their existence.—*Chicago Tribune*.

At a meeting of the K. of L. Grain Trimmers' Assembly, held recently in Chicago, Ill., the resolution was adopted that on and after March 1 all members be paid weekly. It seems that some of the vessel-owners and stevedores have been in the habit of putting off till spring payment for winter—even that done in December and January—thus keeping the men out of their money when needing it the most. The men think the excuses for not paying not good, and they will insist that their employers do as others now do—pay at the end of each week.

ITEMS FROM ABROAD

The Russian Government proposes to find means to reduce the cost of transporting grain to the seaboard, thus making Russian competition a more important factor than ever before.

The grain crop of the Argentine Republic this year will be enormous. The Buenos Ayres *Standard*, just received, says: "In fact, this new year promises to be the greatest and most profitable season ever enjoyed by the Argentine colonist; the boom began in 1877 on a large scale, but the exports of this year will leave all former export years in the shade."

The English Central Chamber of Agriculture has adopted a resolution affirming the wisdom of a bounty on wheat-growing, the bounty to be paid out of the fund raised by the taxation of foreign manufactured goods entering the country from places where duties are imposed on home products. An influential section of the governing classes is undoubtedly at the back of this new movement.

Of barley the United Kingdom produced 78,309,707 bushels, as against 95,721,632 in 1885, and this decrease of 8.65 per cent. is shared by all parts of the kingdom. The return for oats is more favorable, as the production of the whole kingdom was 169,376,088 bushels, an increase of 5.57 per cent. over 160,440,907 bushels, the yield of the preceding year. In this crop Wales is the only portion of the kingdom where there is a decrease, and that is very small.

The South Australian wheat crop shows a surplus of 65,000,000 bushels, and this is now coming forward and explains the indifference of English buyers to the American supply. The competition in wheat growing is sharper than ever before known. Less is said this year about surplus wheat from Russia and India, but this unexpectedly large crop from South Australia forbids the idea that prices will go very high for another year. But wheat is now proportionately cheaper than any other grain, and with the decreased supplies in English markets lower prices need not be expected.

The French Chamber of Deputies on March 10, by a vote of 328 against 238 approved a bill imposing a duty of 5 francs per 100 kilos on wheat. Some time ago a proposition was made to increase the French import duty on wheat from 3 francs to 5 francs on a hundred kilos. The proposition was opposed on the ground that such a duty would shut American wheat out of the markets of France. A counter-proposition was made to make the import duty 4 francs on a hundred kilos. A duty of 3 francs per hundred kilos is equal to 16 cents a bushel, 4 francs to 21 cents, and 5 francs to 26 cents per bushel. An increase of 10 cents per bushel is too much to be viewed with equanimity by the hardest-headed member of the wheat crowd. One hundred kilos is equal to 3½ bushels, or 220 pounds.

The figures for the year show that England produced a wheat crop of 58,071,171 bushels, which shows the large falling off of 15,950,077 bushels, or more than 21 per cent. on the year 1885, at an estimated average in 1886 of 26.87 bushels an acre against 31.51 bushels in the year before. The falling off from the average yield of an acre appears in all the counties of England except Cornwall, Worcester, Stafford, and Westmoreland. For Wales the estimated total produce of wheat amounted to 1,501,075 bushels, at an average rate of 21.86 bushels an acre, being 0.33 of a bushel above the estimated normal average. For Scotland the total produce of wheat is shown to be 1,895,652 bushels, at an average rate of 33.77 an acre, which may be compared with an average of 34.88 in 1885. The year's average, though smaller than the previous year's, is larger by nearly a bushel than the ordinary average. The aggregate results for wheat in Great Britain thus amount to 61,467,898 bushels as compared with 77,587,666 in the preceding year, while the acreage under wheat was 7.8 per cent. below that of 1885. Ireland also shows a diminution in the production of wheat, the number of bushels being 1,879,987, as against 2,048,103, a decrease of 8.21 per cent.

The Odessa correspondent of the London *Daily News* writes: "Serious complaints have been made by a number of the largest English importers and shippers of Russian grain from this port with respect not only to the inferior quality of the grain shipped, but also to the mixing and weighting of shipments with sand and small stone. These complaints were a few days ago formally brought before the Odessa Exchange Committee and a specially convened sitting of the Chamber of Commerce, which have since minutely examined the question. They now declare that the complaints of the British merchants are justly preferred, but attribute the growth and success of these fraudulent practices to the employment chiefly of dishonest agents and buyers, and recommend that the British merchants should discard these people and employ either their own countrymen or local firms of standing and known integrity. Messrs. Van der Fliet & Schultz, of the Odessa Chamber of Commerce, recently waited upon the Governor-General, to whom they communicated the result of their inquiries on this subject. His Excellency at once invited these gentlemen to draft certain measures for the better protection of the British merchants, and pledged himself to use his power in their vigorous enforcement. His Excellency at the same time

observed that if the enormous British grain trade with this central emporium of Southern Russia is to be maintained, the local authorities were bound to safeguard the English buyer and shipper to the utmost extent of their powers, which, properly and vigorously exercised, will at once put an end to the fraudulent practices complained of."

L. Lefebure, an authority on matters agricultural in France, sees no hope for French wheat-growers, and according to him the great body of French farmers are and must cease to be wheat-growers, unless the existing import dues on corn are still further raised; otherwise 26,000,000 of persons will find their occupation gone and be thrown on the charity of their fellow-citizens. In his view it is from Russia that the greatest danger is to be apprehended, and he gives the following statistics of the wheat imported into France in 1885, the quintal (220.46 lbs.) being taken as a unit:

	Quintals.		Quintals
Russia.....	1,859,000	India.....	787,000
United States.....	1,510,000	Turkey.....	611,000
Algeria.....	958,000	Australia.....	383,000

M. Lefebure calls attention to the fact that this very year, 1885, in which Russia flooded France with wheat, was, as a matter of fact, a year for Russia of severe depression. Not only was the yield in wheat some 25 per cent. inferior to the return of the previous year, but wheat-growers were heavily handicapped in competing with their American rivals by the high railway tariffs. Now it is alleged that the Russian government is about to find means to reduce the costs of transport.

A BIG BUCKET-SHOP LOSS

The biggest winning made in any of the bucket shops in a single day during this pork corner has been \$13,500. There have been bigger stories told, but the manager of the biggest bucket shop here gave these figures to the writer yesterday. He knows whereof he speaks, for a private wire encircles all these shops, and they are as closely allied as the pool rooms are in the height of the racing season. It has been a nifty thing for the bucket shops to run "wide open" in this pork deal as they have, and their courage probably has been due largely to the fact that they were as much in the dark over the corner as anybody else. They were not able to settle definitely that there was a corner. So long as they were in that frame of mind they did not hesitate to take any bets that anybody wanted to offer, for the bucket-shop theories are that "because a man thinks he knows a thing is no reason why he does," and that "a man with a pointer" is not nearly so dangerous a character as he thinks he is. If there was a faro bank that gave out publicly that it would allow anybody to bet anything from \$50 to \$10,000 on the turn of a card it would attract gamblers here from all over creation. In fact, a house that advertises that it will allow a man to bet \$250 on the turn of a card is considered a "shining mark" among the professionals. But so far the large bucket shops in this city have actually allowed their customers to bet any sum—their loss, if they so desired—on the course of pork; and the worst slap any of them has gotten so far has been the loss of \$13,500 to a lucky gambler. On that day, Monday, that "shop" lost \$14,500 more than it took in. That loss was not comparable to the ones it received last November, when the whole list of stocks at New York was advancing. In a single day in that month the same concern which lost \$14,500 on pork Monday, lost \$40,000 on stocks.—*Chicago Mail*.

BUCKET-SHOP GAMBLING.

[From Bradstreet's.]

It is time that something was done to check the growing evil of gambling, pure and simple, in produce, cotton, petroleum and railway share quotations. A beginning has been made, but the movement has not gone far enough. The marvelous growth in wealth and power of such institutions as the New York Produce and Stock and Cotton Exchanges and the Chicago Board of Trade has naturally developed a train of what once were minor evils. These excrescences have multiplied rapidly, and so dangerously near do they come to being popular among certain classes that the mercantile community owe it to themselves to apply the knife at once.

We refer to the "bucket shops."

The Produce Exchange of New York, the Board of Trade at Chicago, and the Merchants' Exchange of St. Louis, with help from sister organizations, are now at work to correct this great abuse. The very facilities with which business is now transacted under a system of rules regulating transactions in property for future delivery have been made use of by skilled workers to amass fortunes and demoralize traffic by diverting legitimate business into fraudulent enterprises. Many who are not fully informed have been inclined to hold commercial exchanges responsible for this state of things, and we are all aware that legislative bodies have been importuned to abate the evil by intervention of laws to prohibit gambling in securities, produce and merchandise. The great exchanges, such as the Chicago Board of Trade and the New York Produce Exchange, have adopted stringent rules to prevent transactions in "puts and calls," privilege trading, and it remains to be added that for several years earnest men have given much attention to means for suppressing the form of gambling known as "bucket-shop" trading.

A "bucket shop" is a so-called "stock exchange" or "commercial exchange," where offers to buy or sell,

based upon current market quotations telegraphed momentarily from the leading markets, are the features, but without an actual transaction—gambling pure and simple. The "lay out" is the "ticker" or posted prices of leading stocks or articles of produce or merchandise largely dealt in. The "chips" are the acknowledgedgments of the "bucket-shop" proprietors that A or B or C has bought or sold a certain amount of "Lake Shore," "Lackawanna," "wheat," "pork," "cotton," "coffee," "pig iron," or "petroleum." The transaction entered into may be heralded, as it is in most cases, by printed statements by the proprietor that ventures are covered by actual transactions in the market. But such statements are false.

In New York City there are at least twenty-five bucket shops within gun-shot of the Stock Exchange, which do business openly and above-board, most, if not all, of them on the ground floor. There are probably twice as many such shops "down town" on upper floors, often partially concealed. In the dry goods district, or within is immediate vicinity, along the Bowery and elsewhere on the East Side, and up town between Union Square and Forty-second street, there are many more. Throughout the city it is fair to state that not less than 150 bucket-shop proprietors "buy and sell" stocks, grain, provisions and petroleum "in fractional lots on 1 per cent. margin." Many of them are of the "fly-by-night" variety, and do not remain in one location very long. Some of the shops have been conducted by a class of men who have had experience as faro-bank proprietors. The pretentiousness of a few of the public stock and grain exchanges down town, combined with their publicity, has lent them a species of semi-respectability. But the merchants of New York and the public generally can hardly be expected to bear with them longer on this account.

Special telegraphic inquiry by *Bradstreet's* discovers the following list of open bucket shops at other cities, which is given at length, as of special interest to those who feel that the time has arrived to check the spread of this species of "speculation."

GRAIN, STOCKS AND PROVISIONS.

No.	No.
Syracuse..... 5	Columbus, Ohio..... 3
Indianapolis..... 1	Providence..... 1
Boston..... 36	Minneapolis..... 6
St. Paul..... 2	Nashville..... 1
Milwaukee..... 3	Detroit..... 4
Omaha, Neb..... 2	Evansville, Ind..... 1
Toledo..... 2	Quincy, Ill..... 1

GRAIN, STOCKS, PETROLEUM, ETC.

No.	No.
Buffalo..... 4	Scranton, Pa..... 2
Troy, N. Y..... 6	Pittsburgh..... 4
Hartford, Conn..... 1	Trenton, N. J..... 3
Utica, N. Y..... 3	Harrisburg..... 1
Springfield, Mass..... 2	Elmira, N. Y..... 2
Rochester, N. Y..... 4	Brooklyn, N. Y..... 2
Philadelphia..... 18	Baltimore..... 8
Cleveland, Ohio..... 2	Cincinnati..... 3
Oil City, Pa..... 1	Chicago..... 20

GRAIN, COTTON, ETC.

No.	No.
Atlanta, Ga..... 1	Galveston, Tex..... 1
New Orleans..... 2	Savannah, Ga..... 1
Louisville, Ky..... 2	St. Louis, Mo..... 4

The twenty Chicago bucket shops operate, it is believed, from 400 to 500 branch "exchanges" at larger points throughout various sections of the country. Their patrons not only gamble in grain, provisions, oil and railroad stocks, but on a sort of wheel-of-fortune device, known as the automatic quotations clock. This list accounts for at least 155 or 160 bucket shops in thirty-eight cities in addition to those at New York. It will be recalled that these are run openly, either independently or as branches chiefly of shops at New York and Chicago. The branches of the Chicago shops make daily reports from which consolidated sheets are made up showing the extent to which the country is "long" or "short."

It is estimated that "there are upward of 1,000 'bucket shops' distributed from Maine to California, north and south, in the United States, as well as Canada," where any person may buy or sell securities or commodities dealt in at the various exchanges on a narrow margin and at current market prices, and may avail himself any subsequent quotation to close the trades, either at a profit, less a small commission, or at a loss, plus the regular commission.

Now it is well known that it is extremely difficult to buy or sell at quoted prices. On appearance of an order to buy, sellers often advance prices, or otherwise revise their views to meet the conditions. This element of risk is eliminated by the "bucket-shop" proprietors in order to popularize their business with the masses who trade, or rather pretend to trade, through them.

An estimate made by the author of a brochure entitled "Cold Facts About Bucket Shops," places the daily pretended transactions through "bucket shops" at 50,000,000 bushels of grain, of which about four-fifths are orders to buy, and the remainder orders to sell.

Now if orders to the extent of one-half the magnitude of these estimates of the daily trading were to be executed daily upon the Exchanges of New York and Chicago, the effect upon prices would be material; but under conditions prevalent the "bucket-shop" proprietors are only interested in depressing quotations at one moment during the day to a point below the price at which the 40,000,000 bushels "long" contracts shall be closed, that the immense difference shall be realized in profits, plus commissions, to the "bucket-shop" interest.

It is obvious that this system undermines estimates of values based upon actual transactions, demoralizes trade and fosters gambling, besides draining the purses of the weak and foolish.

Press Comment.

GRAIN ELEVATORS.

The building of elevators should be made a "specialty" by a St. Paul company or firm. Plenty of work may be expected in this state and Dakota since as long as grain is raised people will need warehouses. At present all the great elevators in Duluth and elsewhere are generally built by Chicago contractors. The Northwest provides the material; why does she lack the men?—*St. Paul Journal of Commerce*.

THE WHEAT SITUATION.

The wheat situation in this country is much stronger than it was a year ago. Of the total available supply last July, including the new crop and the remains of the previous one, we have exported up to Feb. 1 ninety millions of bushels, against 45,000,000 in the same months of the previous year. Our available supply now is 179,000,000 bushels, as against 198,000,000 bushels last year at this time. Of our present supply we shall require 120,000,000 bushels for home consumption until next harvest, leaving barely 60,000,000 to export. Last year, during the five months from Feb. 1 to July 1, we exported in wheat and flour 52,000,000 bushels, and the foreign demand is likely to be at least as great now as it was then.—*American Cultivator*.

GRAIN WEIGHING.

The recent criticisms of the Minneapolis grain weighing, under supervision of the state, have called out protests of the weighing department. The several parties connected with the state weighing concur in saying the business is performed in the most careful and efficient manner. As regards the testing of the scales for correctness, the chief weigher says he does not depend upon testing done by the city officials, but that he and his deputies are looking after them all the time, and testing quite frequently. In all cases of weighing by a mill employe when the state inspector is not present to verify the correctness of weight, it is the order of the chief weigher that the weight shall not be returned as the state weight. Sometimes a memorandum of such weights is sent to the office of the chief, with the notation that they are not state weights. The reason for making any return of the occasional cars dropped in that way is that as correct a record as is possible may be kept for the purpose of facilitating the looking up of all cars of grain when inquired for by parties interested.—*Minneapolis Market Record*.

ALWAYS PASSES.

Whatever else fails, it is always safe to count upon the success of the River and Harbor Bill. It is the medium through which nearly every member of Congress is enabled, directly or indirectly, to commend himself to his constituents, and no other general measure ever has quite so strong a hold as this one upon the solicitude of a majority of congressmen. This was illustrated yesterday by the way in which the conference report was pushed to its passage despite the efforts of Mr. Randall to postpone action in the interest of other bills. The appropriations under this bill for the next fiscal year are not much in excess of last year, but the measure gains added importance from the appropriation of \$50,000 for the Hennepin Canal enterprise, which has been knocking at the door of Congress for several years. If the bill receives the approval of the President it will commit the government to the construction of the canal, and probably necessitate the enlargement of the Illinois and Michigan Canal or the improvement of the Upper Illinois River. The advocates of the proposed waterway, however, find an obstruction in the President, and thus are not without apprehension.—*Omaha Bee*.

ELEVATOR VS. CANAL BOAT.

The old contest between the owners of floating and stationary elevators and the Erie Canal boatmen has been renewed, and starts afresh with its accustomed vigor. The cause of the boatmen's woes was told through a veteran boatman to a reporter. The boatmen say they have had a fair-paying average amount of freight during the past season; but they complain that the terminal charges have not been lessened, and that they are to-day as onerous as they were years ago. In the matter of elevating grain they declare that they are still compelled to pay \$5 a thousand bushels at this port for trimming, whereas at Buffalo they are only charged \$1.60 for the same service, and are even allowed, if they desire, to do the work themselves; that is, if they are unwilling to pay the reduced cost. The boatmen also claim even that out of this charge of \$5 in New York the owners of the elevators receive \$3.50, inasmuch as they actually pay only \$1.50 for the trimming. This is one only of several alleged unjust charges made against the boat and the grain. For instance, the weighing charge, which varies in Buffalo and New York and other ports, is considered onerous, as being a direct tax on the grain, and thus drives the trade away from this to other cities. Another complaint by the boatmen is in regard to the question in grain shortages. During the past ten years they claim to have paid for shortage alone not less than \$500,000, and they are now formulating rules which are intended, if possible, to abolish the heavy losses thus sustained. When a boat is loaded in Buffalo the boatman is expected to give a receipt for a full cargo of say 8,000 bushels, but during the past season some cargoes, after being weighed into the

New York elevators, have been found short from 20 to 350 bushels. In these cases the boatmen have had to foot the bill, and taking the average cost of grain per bushel at 80 cents, it will be readily seen how serious the losses must be. The boatmen claim, therefore, that they should not be responsible for anything more than a reasonable shrinkage. That whenever the shortage exceeds a reasonable amount the loss should be shared equally between the owners of the elevators at Buffalo and New York, providing, of course, that the carrier gives complete guarantee by sealing of hatches and other precautions that the grain will not or has not been tampered with in transit.—*New York Post*.

THE RISE IN PRICES OF PRODUCE.

Judging by some of the remarks made by losers on the selling side of produce in this market a listener might infer that the recent advance in prices is an infraction of a rule of the Board of Trade. The rule referred to has not yet been placed on the books, but it is crystallized into a formula which has all the force of authority with a great many. It is that the man who buys anything, except for the purpose of filling shorts at a profit, is an enemy of the trade. The people with whom this is axiomatic seem to hold that every decline is due to the operation of natural causes, and only to be found fault with because it is not extensive enough, while every advance is necessarily a result of "manipulation" and therefore ought not to be tolerated. It is perhaps but natural that the men who have made heaps of money during the last three years by operating on the bear side do not take kindly to the new order of things, which has knocked their calculations on the head as well as making large drafts upon their pocketbooks. It may, however, be worth while to remember that a little advantage to bulls now and then is the only thing that prevents the prices of farm produce from falling to a very low point. The aforesaid bulls are not philanthropists, and some of their methods may be objectionable. But that the effect is healthy, no one can deny, unless it be some of those who lose by being caught on the upturn.—*Chicago Tribune*.

CANALS NOT OBSOLETE.

This is pre-eminently the age of railroads, which have to a great extent thrown the old methods of internal water transportation in the background. But it is not true, as some argue, that there is no further use for canals.

It has been shown, for instance, that the Erie Canal, during the seven months that it is open, governs the rates for grain shipment to New York by rail. When the canal is open New York is the center of the Eastern grain trade, but when it is closed competing ports more than hold their own. It transports more grain during a given time than all the trunk railroads combined. During the seven months of navigation last year 43,619,355 bushels of grain reached New York through the Erie Canal, while but 31,986,766 bushels went to the same destination by rail.

Advocating the policy of improving the canal the *New York Tribune* says:

"Its influence has made New York the commercial metropolis, and has enabled this city and Brooklyn to pay a good deal more than one-half the state taxes, thus bringing a direct benefit to every county in the state. It has also been a great help to all the interior cities, and there is hardly room for argument as to the necessity of maintaining and improving it to the highest state of efficiency."

To a large section of country the construction of the Hennepin Canal would be as beneficial as the Erie Canal has been to New York.—*Chicago Journal*.

TAXING SPECULATIVE DEALINGS.

While the statesmen at Washington are confronted with the problem of a surplus, our local legislators are engaged in seeking out fresh subjects of taxation. One of these latter gentlemen has introduced a bill taxing brokers upon speculative sales made by them, and a state senate committee has been holding sessions in New York City taking testimony regarding the effect of the bill. This measure compels every banker, broker or person dealing in the stocks or bonds of corporations, or in crude or refined petroleum, or in cotton, pork, grain, flour, teas, coffees, spices or drugs, and negotiating a contract for the sale of such property or securities to an amount exceeding \$100, to deliver to the purchaser a bill of sale of the same, having affixed a stamp amounting to not less than one-fiftieth of one per cent. on the gross amount of the sale. The bill excepts from its operation sales of securities, actual delivery of which is made within one day after the sale, and sales of merchandise where the bill of sale conveying the right of possession of the same is delivered on the day of sale. The bill provides various penalties for non-compliance with its provisions, among other things making invalid contracts or agreements which fail to observe the requirements of the law. Brokers who fail to make a bill of sale and to affix and cancel stamps as required are to be subject to a fine of from \$250 to \$500 for each omission.

The bill is in intention an attempt to tax speculative sales of property and securities. This it would be impossible to do under the bill as drawn without at the same time taxing real sales. The distinction between real and speculative transactions is a very narrow one indeed, as Senator Vedder, the author of the bill, admitted at a hearing in New York, and it is one which could not be drawn in practice. The bill must either entirely fail or become a tax on sales, real as well as speculative—that is, a tax on internal commerce. Such a tax, we need scarcely say, is condemned by every consideration of policy. Its

only result would be to check or perhaps cripple the trade of the commercial metropolis of the country, and to drive commerce away from it. What is wanted nowadays is not checks and hindrances to commerce, but aids and facilities to further it. It is quite evident that the committee having the bill in charge have not sufficiently considered this aspect of it. They do not seem to have comprehended what would be its effect in detail. They were informed by the president of the Stock Exchange that in not more than 50 per cent. of the sales could the numbers of certificates of stocks required by the bill be given on the same day as the sale. A prominent member of the Produce Exchange informed the committee that the bill would exact upon speculative sales of wheat a sum considerably in excess of the brokers' commissions. The measure is a crude and impolitic one, and should be summarily voted down in the legislature. Another proposed measure which should share the same fate is the McCann bill, which prohibits dealing in options and contracts for future delivery. This is a revival of an old scheme of legislation, the futility and impolicy of which has been often pointed out heretofore.—*Bradstreet's*.

CORN PRODUCTION IN THE SOUTH.

The Department of Agriculture makes a statistical showing of the expansion of Southern corn cultivation. The crop of 1886 in the Southern states is footed up as 466,871,000 bushels, or 28.3 per cent of the total crop of the United States, which was 1,665,441,000 bushels. The Southern corn crop of 1870 was a considerably larger percentage of the whole, amounting to 237,295,000 bushels, while the crop of the United States was 760,944,549 bushels, making the Southern crop about 32 per cent. of the whole. The *Courier-Journal* objects to the imposition of false information upon its readers from any source or for any purpose; and falsehood in commercial literature can not by any possibility be a good seed to sow. The Department of Agriculture makes this empirical little dash of statistics serve to illustrate the fact, as it is called, that the South is gaining upon other sections in the cultivation of food crops; but in its year of comparison, as well as that which we cite, the percentages of relative yield were really results of the relative weather conditions in the several sections. The corn crop of 1885 was 1,936,000,000 bushels, and that of 1886 was planted on a much larger area, and with a good average yield, the crop would have been about 2,200,000,000 bushels. It was about 600,000,000 bushels less than this, and the loss fell upon the Northwest mainly. On a full yield North, the Southern crop would have been 21 per cent. of the whole, or a ratio of eleven points less than that of 1870.

CAPITAL JUST THE SAME EVERYWHERE.

English capital is absolutely heartless and unpatriotic. Not content with developing the culture of wheat in India at the expense of agriculture in England, our British cousins now propose to go a step further and establish great mills in India to manufacture flour to be shipped to Europe. Already English "enterprise" has about ruined English farmers and made wheat-growing in Great Britain absolutely unprofitable, and now, with great mills in India to grind Indian wheat, they propose to "wipe out" every flouring mill in the United Kingdom and in every European country which has no protective tariff on flour. That will be the inevitable result, but the capitalists are indifferent. Recently the work of raising £50,000 to establish a mill at Bombay, India, was achieved in a half-day by some London capitalists. American millers may view the project with complacency, if the millers of any nation may. The Indian flour will be as inferior in quality as the Indian wheat is, and as it will be ground without any improving admixture of better wheat, it will be no competitor in the best markets with American and Hungarian flour. Consequently, when more and more British mills are forced to suspend, there will probably be an increased demand in Great Britain for fine flour from the United States and Hungary. America will of course promptly exclude by tariff any cheap foreign flour or grain, and so long as England allows us to supply her needs without tariff on our flour, so long we will be in position to extract a reasonable percentage of the milk from the British commercial cocco-nut.—*Milling World*.

READJUSTING RAILROAD TARIFFS.

Western railroad officials in their efforts to prepare for the enforcement of the Inter-State Commerce act seem to meet with only one serious obstacle, viz.: the difficulty of getting two competing lines to agree in regard to a rate between terminals when one road is largely dependent upon through traffic and the other on local business. This is something of a difficulty indeed, and cases involving it are not frequent, but it can be met only by cutting down charges at intermediate points until they bear an equitable relation to the competitive long-distance rate. Pool commissioners and freight agents are loath to apply the knife for the benefit of the local neighborhoods, but a little surgery will soon be necessary, and the sooner it is performed the better for all parties concerned.

It is idle to talk of a readjustment by shoving up through rates instead of reducing locals. The axiomatic doctrine of the railroad people that "the cheapest freighter is the master of the pool" will take on an enlarged and stronger significance in about six weeks, when pools will be abolished and the lowest bidder will take the whole volume of competitive business. A road having few intermediate stations of any importance and being excluded from a division of pool earnings must of necessity bid earnestly for the traffic between terminals and offer the best rate it can afford. Would the road having "local business to protect" abandon the through traffic to

the cheaper freighter? Not at all. Freight loaded and unloaded at terminal points and carried through without detention and in steadily-moving cars can be taken at a very low rate, and on such traffic any charge a shade above mere movement expense is profitable. The strong road with a large volume of business at intermediate points must meet the rate fixed by its competitor between terminals, and, having done this, must faithfully observe the short-haul doctrine as applied to its local business. Railroad managers object that this would be making the force of competition felt in some degree at all places along the line, but that is just what the people believed the new law was intended to accomplish.—*Ex.*

AIM OF THE CULLOM BILL.

The short-haul section of the Cullom bill aims to strike a just mean between the looseness permitted by the old English courts and the unreasonable rigor of the rule adopted by the commission. This country, with its heavy long distance and transcontinental traffic, could not stand the strict, inflexible, short-haul doctrine of the British commission, and yet justice demands that some rule should be made in regard to differential charges. Hence the Inter-State Commerce act distinguishes between combined through routes and the line of a single carrier and gauges the short-haul rule differently for each. It limits the principle to shipments in the same direction over the same line with the shorter distance included within the greater, and to cases where the service is performed under substantially similar conditions and circumstances. These limitations preserve all the requirements of justice, and when construed and applied by an intelligent commission they will furnish the flexibility needed to adjust rates according to varying conditions of trade and transportation. Any special rate made reasonable by peculiar conditions and circumstances can be justified under the inter-state commerce, but all individuals similarly situated must be treated alike. It is this carefully drawn, wisely adjusted rule which railroad officials have in view when they denounce the new law as vague and ambiguous.—*Exchange.*

THE RIVER AND HARBOR BILL.

The river and harbor bill was sent to the President several days ago, but it did not receive his signature before the adjournment of Congress, and so fails to become law. It is hardly conceivable that the failure was an oversight, and it therefore may be assumed that the President did not approve of the measure. Perhaps he objected to the \$225,000 appropriation for Buffalo Harbor—so far as known the only really fair and unobjectionable estimate in the whole list. For the sake of our neglected port it is certainly to be regretted that the bill came to naught. But Buffalo can stand the loss a good deal better than the country could afford to pay the remainder of the \$10,000,000 appropriated for improvements that, so far as is known, neither necessity nor convenience demanded. The amount proposed was not large compared with the \$24,000,000 job which the more courageous President Arthur vetoed, but the manner in which the bill was worked through Congress, the stifling of all discussion, and the consequent ignorance of the people as to its provisions entitled it to no other fate than the one it has met.

The history of the bill's passage is interesting. In the first place, debate was suppressed on the original measure. In the committee of the whole a substitute appropriating \$7,500,000 was voted, and this reduction was called a great piece of economy. But when the committee reported to the house, that body rejected the substitute and the original bill was passed without debate. The generous senate no sooner had its hands on the bill than it ran the appropriation up to \$10,500,000, and in this shape it went back to the house, the rules were suspended, no debate was allowed though discussion was asked for, and the matter was put at once in conference—and when a bill gets to a conference committee that is the last the country ever knows about it unless it becomes a law.—*Buffalo Express.*

DONNELLY'S DEFEATED GRAIN BILL.

The power to fix maximum rates is in its nature a judicial power, only to be exercised after the most careful investigation, with all the evidence on both sides duly heard and weighed. A legislative body sitting for forty-seven working days once in two years, its whole time occupied with thousands of subjects of general and local legislation, is as wholly unfitted from the nature of things and of its functions to exercise such a power as any possible body of men can be. It has neither the time to investigate all the data and the complicated problems involved in such questions, nor the appropriate means of authenticating the correctness of such data, nor the impartial temper necessary to the adjudication of questions involving so many conflicting interests. The very fact that such legislation is said to have been demanded by the Farmers' Alliance, solely in the interest of the farmers, stamps it as partisan, prejudiced and one-sided. That a bill framed to meet the views and interests of a single class, without the slightest regard to any conflicting interests, is likely to be unjust and oppressive to the latter, goes without saying. That the bill called by a misnomer Donnelly's bill was an oppressive one to the railroad companies seems to have been generally conceded. Mr. Donnelly himself certified that it was so in his judgment by the fact that in the bill as originally introduced by him much higher maximum rates were fixed. It is but fair to Donnelly to assume that he wished to make the lowest rate possible in the interest of the farmers—and yet his rates were very largely reduced by subsequent amendments offered in the house. So that we have in this simple statement of facts Mr. Donnelly's own implied testimony

to the fact that the bill as amended was an unjust and oppressive one. The house would have been lacking in common sense, to say nothing of common justice, and it would have failed in a proper respect for Mr. Donnelly's judgment, if it passed the bill which was thus stamped with his implied disapproval. This seems to us a sufficient explanation of the defeat of the bill, without invoking the mysterious agency of the devil in any of his numerous forms of wickedness.—*Pioneer Press.*

MISSISSIPPI TRANSPORTATION FOR NORTHWESTERN PRODUCE.

The commercial advices tell of the arrival at New Orleans of a large shipment of Minnesota wheat for export. This grain was transported to Cairo by rail, there transferred to barges, and so carried to the Gulf. The fact is thought significant, because it is the first shipment for export by this route for several years, and a larger quantity of grain is said to be on the way. We notice the fact with satisfaction, because the *Pioneer Press* has never varied in its estimation of the importance of the Mississippi, and of the part which it is destined to play, not only in the interior but in the foreign commerce of the country as well. The superficial reasoner has been misled by the patent fact that the railroads have, of late years, been taking away from the water routes the bulk of the grain-carrying business. But people who thought that this indicated the premature decline of our waterways as carriers are ignorant of the fact that carrying by water shows, in all countries, three stages of development. In the first place, before railways are constructed, the rivers are the sole channels of commerce. Then comes the railway age, when the steamboat is relegated to the function, principally, of a local carrier. And then comes the final stage, when the waterways reassert their value, and are of the greatest public utility not only in the actual conduct of business but as regulators of freight rates. It is this third period upon which we believe that the Mississippi Valley is entering. For many years the capital and enterprise of the country have been turned toward developing the east and west lines of travel, and the supremacy enjoyed by Chicago and New York as grain markets was not disturbed. That time is ended. The new rail connections to be made between the wheat fields of the Northwest and the markets of the Atlantic seaboard would alone assure the diversion of a considerable portion of the export trade. The rise of Duluth is an indication of the prominence which the Northern water route is to assume. The new birth of the Mississippi route will follow not far behind.

There have been wanting but two things to turn a great share of the grain-exporting business down the valley. The one is an adequate improvement of the river, and the other is the provision of facilities for handling and shipping grain at New Orleans. The former is making progress, year by year. The people of the Crescent City are, at last, we believe, awaking to a sense of the importance of the latter. There have been conferences between Kansas City and New Orleans, to see how the traffic of the former could be assisted by finding an outlet through the latter. All the way down the valley there is a stir of new interest, looking toward the Gulf for the commerce of the future. The revival of wheat exports through the Southern port is but one of many straws to show the direction in which trade is turning. A stimulus to this will doubtless be found in the Inter-State Commerce Bill. That act raises the water routes of the interior to an importance such as they have not enjoyed for many a year. To them and to them alone can the people look for the prevention of that rise in through rates which the short-haul clause would otherwise necessitate. If the Northwest is to be saved from the folly of legislators, it will be more through its possession of the head of navigation on the great river of the continent than by any other agency. To the Mississippi the attention of those interested in cheap transportation is now turned, and our great waterway and the seaport which lies at its mouth are to rise to a new place in the national system of transportation. If New Orleans understands her interest, if she will awake from her lethargy, breathe in something of the spirit of the new South, enter with vigor the race for commercial supremacy and supply the facilities for conducting an export business on a grand scale, the next few years will witness a gradual diversion of a large portion of the heavy freight trade of the Northwest from the east and west to the north and south line. We believe that a foreshadowing of this is to be seen in the reappearance of grain shipments from Minnesota to New Orleans. And we look forward with more confidence than ever to the day, now not so far distant or so uncertain, when the great grain product of the Northwest shall move to its ultimate destination by way of the Mississippi, and when hosts of river steamers, with their tows of barges, will line the busy wharves of St. Paul.—*St. Paul Pioneer Press.*

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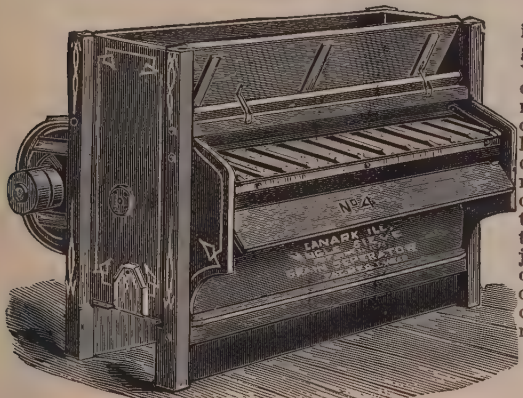
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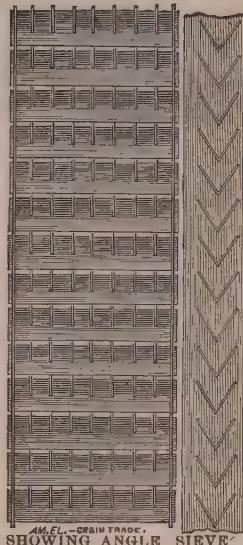


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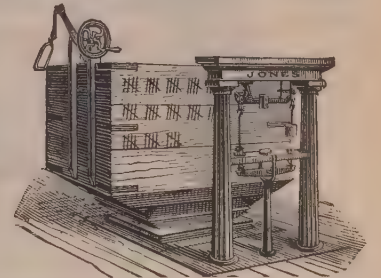
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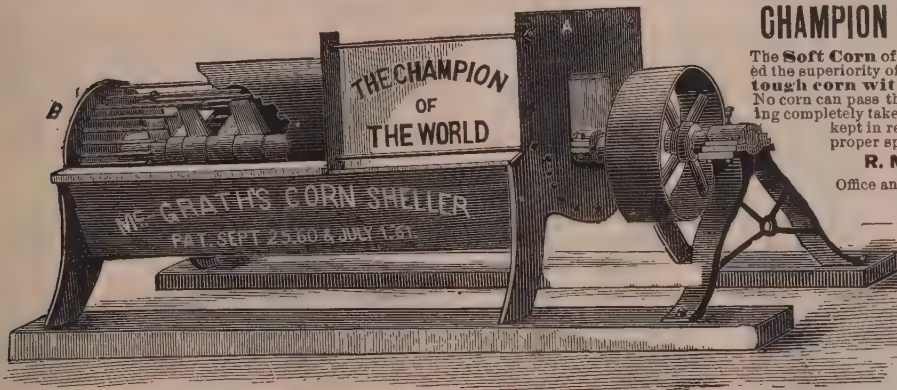
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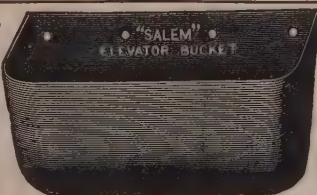
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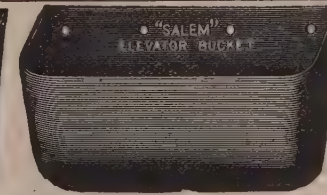
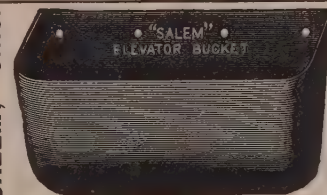
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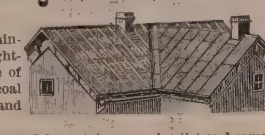
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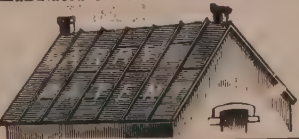
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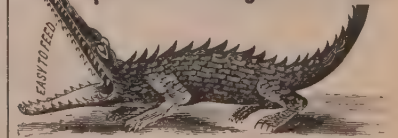
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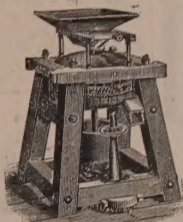
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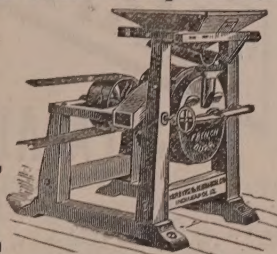
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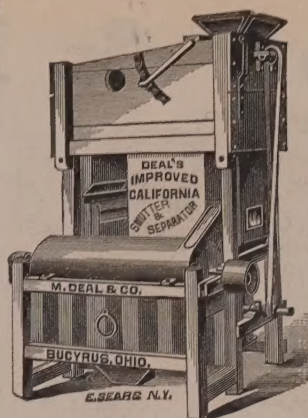
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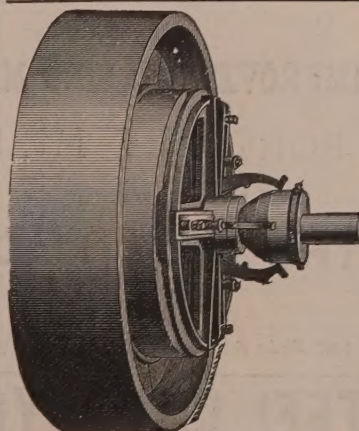
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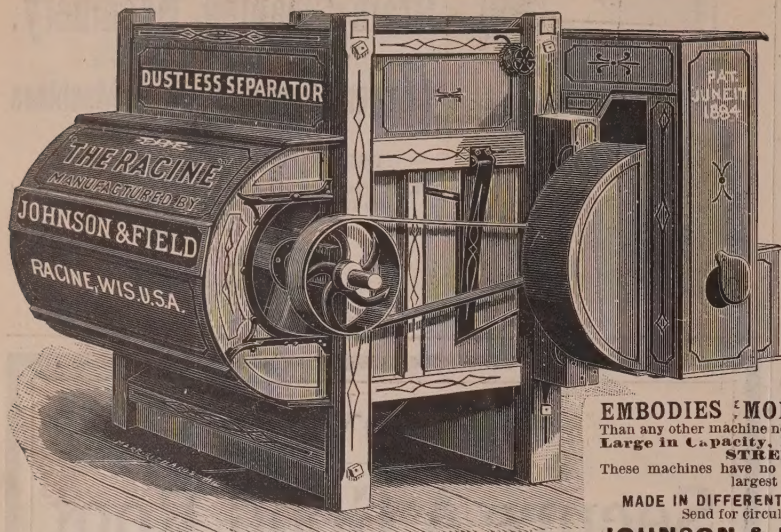
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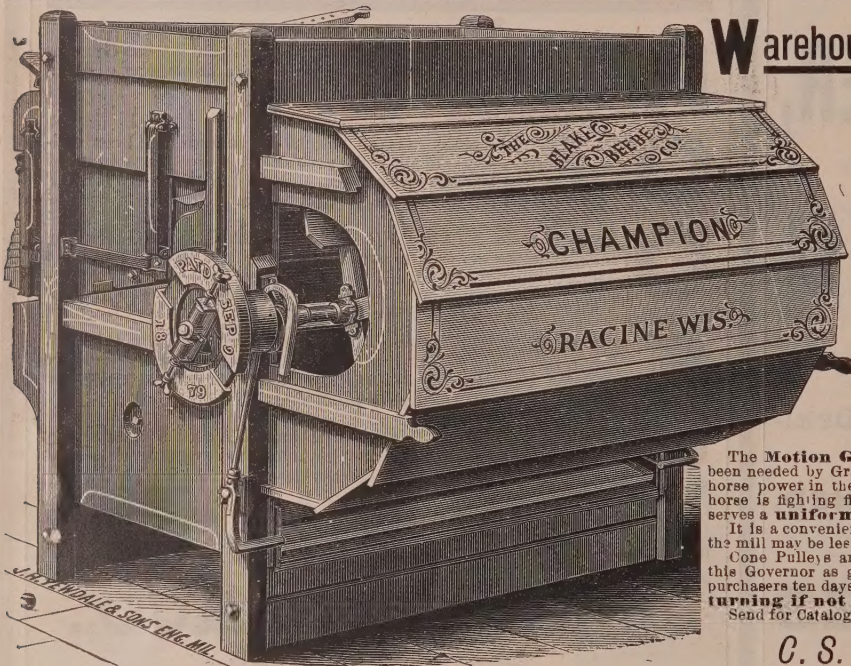
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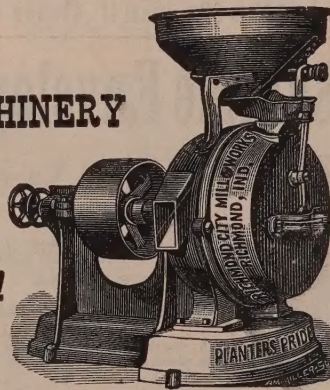
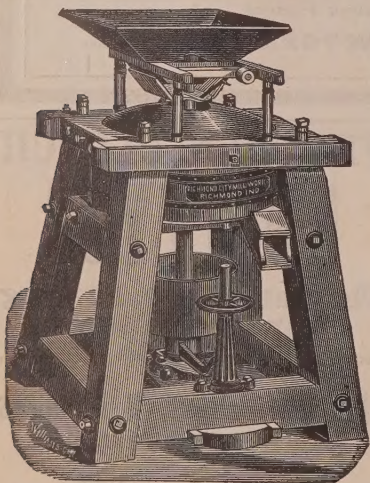
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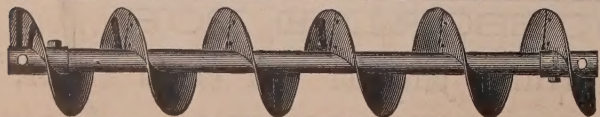
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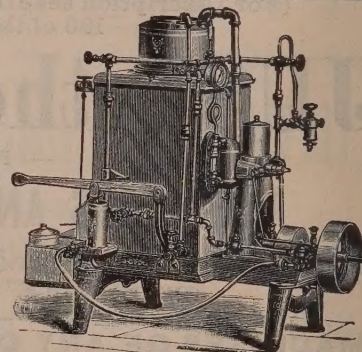
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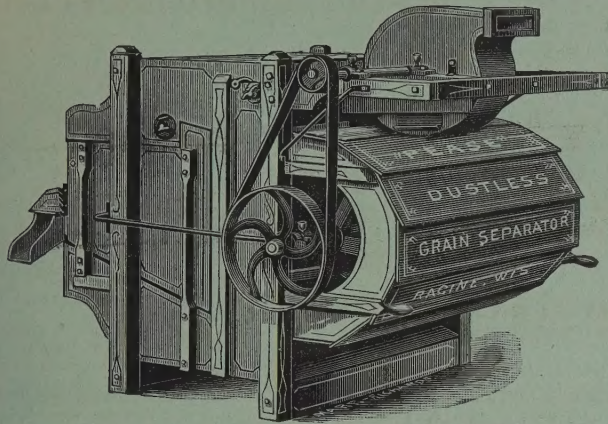
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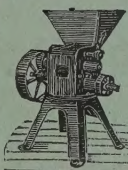
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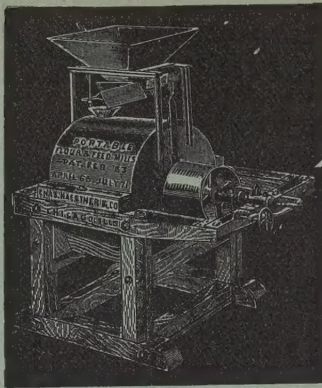
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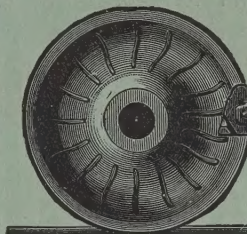
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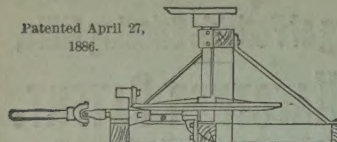
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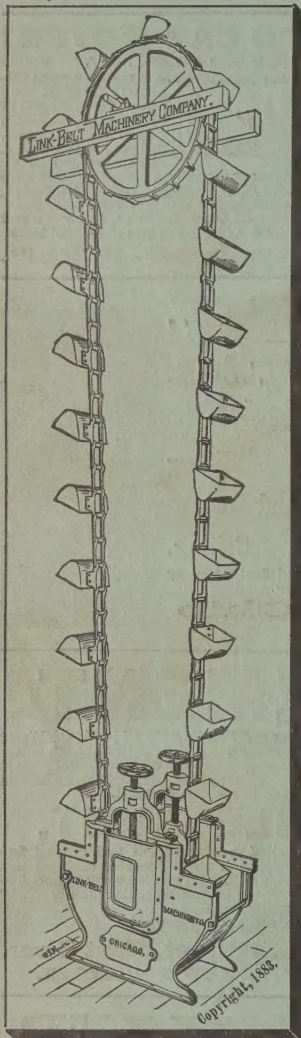
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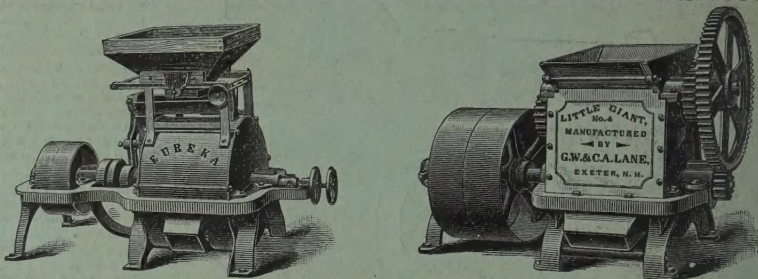
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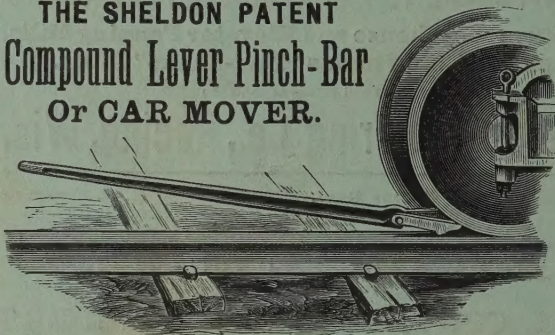
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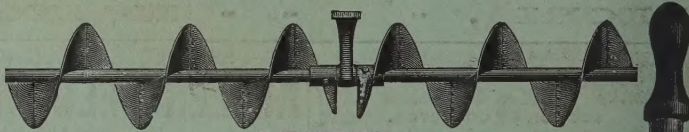
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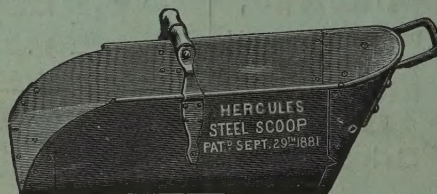
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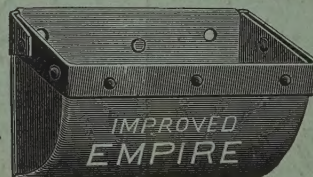
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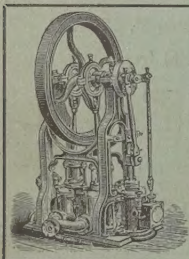
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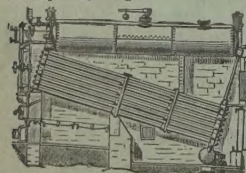


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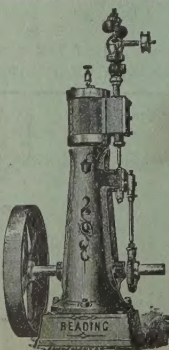
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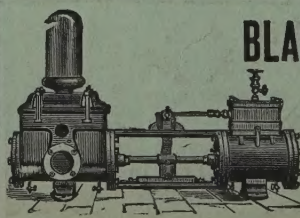
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